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# Journal of the Society of Arts.

FRIDAY, JUNE 26, 1868.

## Announcements by the Council.

### FINAL EXAMINATIONS, 1868.

In the List of Prizes and Certificates, given in the *Journal* of the 12th inst., the following corrections should be made:—

- 831.—John Shaw was described as of the Halifax Mechanics' Institution; he belongs to the Halifax Working Men's College.  
 514.—Brown, William, 20, Andersonian University, Glasgow, stated in the List of Certificates to have obtained a second-class in Geography, really obtained a second-class in Geometry.  
 684.—Thorn, Andrew H., is the same as 676—Thom, Andrew H.

### INSTITUTIONS.

The following Institution has been received into Union since the last announcement:—

Cheltenham, Whitworth School of Practical Science.

### SUBSCRIPTIONS.

The Midsummer subscriptions are due, and should be forwarded by cheque or Post-office order, crossed "Coutts and Co.," and made payable to Mr. Samuel Thomas Davenport, Financial Officer.

## Proceedings of the Society.

### SEVENTEENTH ANNUAL CONFERENCE.

The Seventeenth Annual Conference of the Representatives of the Institutions in Union, and the Local Educational Boards, with the Council of the Society, was held on Friday, the 19th inst., at 12 o'clock noon. WILLIAM HAWES, Esq., F.G.S., Chairman of the Council, presided.

The following is a list of the Institutions and Local Educational Boards represented at the Conference, with the names of their respective representatives:—

|  |                               |
|--|-------------------------------|
| Carlisle Mechanics' Institute                  | Mr. Edmund Potter, M.P.       |
| Chelmsford Literary and Mechanics' Institution | Mr. John Gibbs.               |
| Croydon Literary and Scientific Institution    | Dr. Lanchester.               |
| Devonport Mechanics' Institution               | Mr. W. Mogg.                  |
| Epsom and Ewell Literary Institution           | Mr. J. W. Ryder.              |
| Glasgow Institution                            | Mr. John Phillips (chairman). |
| " Tonic Sol-fa Choral Society                  | Mr. Alexander Craig.          |
| Hastings Mechanics' Institution                | Rev. John Curwen.             |
| Huddersfield Mechanics' Institution            | Mr. J. Pitter.                |
|  | Mr. John Dodds.               |
|  | Mr. William Marriott.         |

|  |  |
|--|--|
| Lancashire and Cheshire Union of Institutes                      | Mr. Alderman Rumney.<br>Dr. Pankhurst.<br>Mr. Thomas Lawton (visiting agent).  |
| Llanelli Mechanics' Institution                                  | Mr. J. F. Adams (Hon. Sec.).   |
| Lockwood Mechanics' Institution                                  | Mr. Josiah Berry (President).  |
| London, Beauvoir College Evening Classes                         | M. Robert Griffiths.   |
| " Birkbeck Literary and Scientific Institution                   | Mr. W. Douglas.<br>Mr. J. H. Levy.<br>Mr. G. M. Norris.<br>Mr. J. Rigby Smith. |
| " City of London College   | Rev. R. Whittington.<br>Rev. J. Maskell.<br>Mr. F. Reynolds.                   |
| " Metropolitan Association for Promoting the Education of Adults | Mr. W. G. Larkins.   |
| " Royal Polytechnic Evening Classes                              | Rev. C. Mackenzie.   |
| " Walworth Literary and Scientific Institution                   | Mr. Frederick Wood.  |
| Oldham Lyceum  | Mr. John T. Hibbert, M.P.<br>Mr. John Platt, M.P.                              |
| Salford Working Men's College                                    | Mr. John Plant.  |
| Slough Mechanics' Institution                                    | Rev. R. J. Simpson.  |
| Southampton Athenæum   | Mr. W. Johnson.  |
| South Staffordshire Association                                  | Lord Lyttelton.<br>Mr. F. Talbot (Visiting Agent).                             |

The Secretary read the following

### REPORT TO THE COUNCIL OF THE SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND COMMERCE.

GENTLEMEN,—In laying before you a summary of the proceedings of the Union of Institutions, I have the pleasure of again recording an increase, and a very considerable one, in the number of the candidates who have availed themselves of the advantages of the Society's Final Examinations. The numbers this year examined have been 1,842, as compared with 1,439 examined last year, and this is the more remarkable as the number last year was very largely in excess of any previous year. The number of Local Boards has also increased, there being this year 135, whilst last year there were 120. But while I record so large an increase in the number of candidates examined, I regret that the number of those who have succeeded in obtaining certificates has not increased in the same proportion; for of the 1,842 who have this year submitted themselves for examination, 1,308 only have passed, as against 1,121 who were successful last year, out of 1,439. So that whilst the candidates have increased at the rate of about 27 per cent., the number of those passed has only advanced at the rate of 16 per cent. The percentage of successful candidates this year is only 71, as against 78 last year out of those examined. I append a table showing the comparative results of the two years:—

|   | 1868. | 1867. |
|---|-------|-------|
| No. of Local Boards at which Final Examinations were held ..... | 135   | 120   |
| „ Candidates examined .....                                     | 1,842 | 1,439 |
| „ „ passed .....  | 1,308 | 1,121 |
| „ Papers worked .....   | 2,547 | 2,050 |
| „ 1st class certificates .....                                  | 318   | 343   |
| „ 2nd class „ .....   | 608   | 517   |
| „ 3rd class „ .....   | 801   | 664   |
| „ unsuccessful papers .....                                     | 820   | 526   |
| „ Prizes awarded .....  | 65    | 61    |

One very remarkable feature in the examinations is shown by this table, viz., that while there has been a very large increase in the candidates, the number of First-class Certificates is actually less than when fewer candidates presented themselves; it will also be remarked that a very large number of the papers worked obtained no certificates whatever, 820 being rejected, a very much larger proportion than the increased number of papers worked should have produced. The number of papers worked would appear to have increased at the rate of 22 per cent.; the number of papers in which no certificates have been awarded has increased by 44 per cent. These facts warrant me in again calling the attention of the Local Boards to the necessity of more stringent action with reference to the certifying candidates as qualified to attend the final examinations. I have on former occasions dwelt on the importance of the careful exercise of this duty on the part of Local Boards. The results of the present year show glaringly the unfortunate laxity which has prevailed. In several instances candidates have been permitted to attend whose knowledge of the subject has been literally *nil*, as not a single mark could the examiner award to the papers they have worked. The Local Boards should bear in mind how much unnecessary disappointment to the candidates would be avoided, as well as that serious discouragement which a rejection by examiners inevitably produces. It is not fair to the candidates that they should be permitted to come up to the examinations without some reasonable prospect of their being passed; and, irrespective of any consideration for them, the Boards should not forget the additional labour which is thus needlessly thrown upon the examiners in going over papers of candidates ignorant of the very elements of the subjects they are allowed to be examined in.

In making the above remarks on the examinations of the present year it is but justice to those candidates who have carried off certificates that I should point out that the standard of the examinations has remained the same, and that the character of the certificate indicates the same high degree of merit as on former occasions. Moreover, the number of prizes has actually increased, showing that a larger number of meri-

torious candidates have come forward. The examiners' remarks will be found in the appendix to this report.

The Prince Consort's Prize has this year been adjudged to Robert Creaser Kingston, aged 21, of the Royal Polytechnic Institution, gardener, who in this and the three preceding years has received the following First-class Certificates:—

1865. Arithmetic—First-class Certificate.

1867. Botany—First-class Certificate, with First Prize, and the Royal Horticultural Society's Prize of £5.

1867. Floriculture—First-Class Certificate, with First Prize, and the Royal Horticultural Society's Prize of £5, and also, together with Book-keeping (2nd-class Certificate), the *Gardeners' Chronicle* Prize of £3.

1868. Chemistry—First-class Certificate, with First Prize.

„ Fruit and Vegetable Culture—First-class Certificate, with First Prize, and the Royal Horticultural Society's Prize of £5, and also, together with Mensuration (2nd-class Certificate), the *Gardeners' Chronicle* Prize of £3.

There are this year four other candidates who have each obtained the same number of First-class Certificates as the Prince Consort's Prize-man, but inasmuch as Mr. Kingston had obtained four First-class Prizes, a larger number than any of the others, the Council had no difficulty in awarding the prize.

The Special Prizes offered by the Royal Horticultural Society for gardeners, by the Proprietors of the *Gardeners' Chronicle*, by the Royal Geographical Society, and by Mr. Twining, have, with two exceptions, been taken. The particulars have already been published in the *Journal*. This year I am happy to state that several of the prizes to females, which were offered in compliance with a wish expressed by the Conference two years since, have been this year taken, and the number of female candidates has increased from 64 last year to 76 this year. A larger number of prizes has been taken by them, although fewer have passed than last year; only 54 this year, against 57 last year.

The Paris Exhibition of last year had the effect of rousing the attention of the public to the greater advantages in the way of education, which appeared to be enjoyed in France and other continental countries, by those engaged in industry, over those of similar classes in this country, whether artisan, manager, or manufacturer; and the importance of "Technical Education," as it has been somewhat loosely termed, has been a prominent topic of discussion. Early in the year the Society called together a Conference on this subject, which was well attended, and resolutions were passed affirming the necessity of a larger element of scientific instruction being introduced into education generally, and greater facilities for its being given. The Council were requested to form a committee

to draw up a report on the subject. That Committee has been, and still is, actively at work, and its report is in a forward state of preparation.

Mr. Whitworth's munificent gift, for the endowment of thirty scholarships, of the annual value of £100 each, for promoting the study of those branches of science which are connected with the engineering profession, is a noble example, which I trust will stimulate others, whether private individuals or public bodies, to render aid in this direction, and continue the good work which has been commenced. This Society, established for the promotion of Arts, Manufactures, and Commerce, is deeply interested in the question, and most of those present are probably aware that Mr. Whitworth

has placed at the disposal of the Council the nomination of three artisans to exhibitions of £25 a-year each, to enable them to prepare for the competition which is to take place next year for the scholarships, an act which cannot fail to be highly appreciated by those assembled at the Conference.

In the Elementary Examinations held by such of the District Unions and Local Educational Boards as have availed themselves of the elementary papers issued by the Society, the certificates being awarded by the local authorities themselves, there has been a slight falling off in the number of candidates. The results of this year's Elementary Examinations are given in the following table:—

ELEMENTARY EXAMINATIONS, 1868.

| Name of Union or Local Board.                  | Number of Centres. | HIGHER GRADE.    |         |                    |         | LOWER GRADE.     |         |                    |         |
|--|--------------------|------------------|---------|--------------------|---------|------------------|---------|--------------------|---------|
|  |                    | MALE CANDIDATES. |         | FEMALE CANDIDATES. |         | MALE CANDIDATES. |         | FEMALE CANDIDATES. |         |
|  |                    | Exa-<br>mined.   | Passed. | Exa-<br>mined.     | Passed. | Exa-<br>mined.   | Passed. | Exa-<br>mined.     | Passed. |
| Aldershot and Farnham District .....           | 1                  | 15               | 11      | ..                 | ..      | 10               | 7       | ..                 | ..      |
| Belfast Science School, .....                  | 1                  | 16               | 12      | ..                 | ..      | ..               | ..      | ..                 | ..      |
| Blandford .....                                | 1                  | ..               | ..      | ..                 | ..      | ..               | ..      | 4                  | 3       |
| Christchurch .....                             | 1                  | 4                | 3       | 1                  | 1       | 32               | 26      | 29                 | 21      |
| Hastings and St. Leonards .....                | 1                  | 2                | 2       | ..                 | ..      | ..               | ..      | ..                 | ..      |
| Hertford .....                                 | 4                  | 4                | 2       | ..                 | ..      | 38               | 22      | ..                 | ..      |
| Lancashire and Cheshire Union of Institutes .. | 48                 | 225              | 104     | 7                  | 3       | 854              | 357     | 249                | 124     |
| Lichfield .....                                | 1                  | ..               | ..      | ..                 | ..      | 11               | 7       | ..                 | ..      |
| Metropolitan Association .....                 | 18                 | 50               | 41      | 28                 | 23      | 392              | 240     | 236                | 180     |
| New Swindon .....                              | 1                  | 11               | 11      | ..                 | ..      | 39               | 31      | ..                 | ..      |
| Rugby .....                                    | 2                  | 3                | 2       | 15                 | 5       | 1                | 1       | 19                 | 13      |
| Yorkshire Board of Education .....             | 18                 | 104              | 88      | ..                 | ..      | 427              | 248     | ..                 | ..      |
| TOTALS .....                                   | 97                 | 434              | 276     | 51                 | 32      | 1,804            | 939     | 537                | 341     |

Comparing these returns with those of last year, it appears that in 1867 these examinations were held by 19 District Unions or Boards at 113 centres; this year, only 12 District Unions or Boards have held them, at 97 centres. In 1867 there were 2,854 candidates, of whom 1,393 obtained certificates. Of these, 646 were candidates in the higher grade, of whom 392 obtained certificates; 2,208 in the lower grade, of whom 1,001 obtained certificates; this year the whole number of candidates examined was rather less, being 2,826, of whom, however, 1,588 obtained certificates, a much larger number than last year. Of these candidates, only 485 were higher grade, with 308 successful; and 2,341 lower grade, with 1,280 successful. Among the higher grade candidates were 51 females, obtaining 32 certificates; and among the lower grade were no less than 537 females, with 341 successful; while, last year, there were in the higher grade 45 females, 31 of whom were successful; in the lower grade, 413 females, with 230 successful.

The Examination by the Yorkshire Board

of Education has this year, for the first time, been restricted to *adult* members of evening classes, and schoolboys, that made up one-half of the candidates in past years, have been excluded. Moreover, a special and independent examination for females has this year been introduced in Yorkshire with great success. The returns are not included in the number given, as the Examination is of a different standard.

It is remarkable that so slight a falling-off should have taken place in the total number of candidates examined, when it is mentioned that two important Unions—the South Staffordshire Association and the Worcestershire Union did not this year make use of the papers furnished by the Society, and consequently the returns of any Elementary Examinations they may have held do not appear in the foregoing table. Moreover, the important fact should not be overlooked that, although the number examined was slightly less than last year, the number passed was considerably greater, showing that the candidates came up better prepared. It is,

however, to be regretted that the number of higher-grade candidates is so much smaller, but it may be hoped that those who have been successful in obtaining certificates of the lower grade will not remain contented with this, which, after all, does little more than show that they have mastered the rudiments of a primary education, but will proceed to the higher grade, and ultimately to the Final Examinations of the Society.

It will be observed that the returns include the candidates examined by the Metropolitan Association for Promoting the Education of Adults. This association preferred, as on former occasions, to use elementary papers prepared by their own examiners, but essentially similar to those issued by the Society. In their elementary examinations the table shows that there has been a very considerable advance upon last year, but this has been entirely in the lower grade candidates, for the number of higher grade candidates is less. The proportion of females, however, is notably larger in the metropolitan district, the numbers being 264 this year, with 203 passed, while last year there were only 75 examined, with 40 successful. This Association also holds a special examination in needlework, and out of 118 candidates who came up to be examined in that subject, 68 obtained certificates; last year the number was only 60, with 33 certificates. The number of candidates for examination in religious knowledge, held by this Association under the auspices of the Bishops of London and Winchester, was 90 in the lower grade, and 23 in the higher. The returns in this subject are not yet sent in by the Examiners.

The reports of the Society's visiting officers, showing what has been done in their respective districts, and the remarks of the Examiners on the papers worked in the Final Examinations, are given at length in the Appendix.

#### APPENDIX.

Mr. Henry H. Sales, Visiting Officer for Yorkshire, writes:—

To measure the educational work of the Society of Arts in this county by the number of candidates at the Final Examinations, is to apply a fallacious test. The special function of the Society appears to be that of a pioneer in matters of Arts, Manufactures, and Commerce, and, having broken up the fallow ground, to leave the field for new territory as soon as a goodly number of husbandmen have entered into possession. The Universities' Local Examinations, the scheme of the Science and Art Department, and the examination of night-schools by the Whitehall Department, are all developments and extensions of plans originated by this Society, and still bearing its impress. Therefore, to confine this report to its present direct operations is to give a most inadequate conception of its labours, and of the results consequent thereupon.

The year that has intervened since my last report is remarkable for the commencement of new and enlarged exertions in every department of education. The

activity that is becoming everywhere apparent is not in behalf of some novel scheme, or in the promotion of any uniform system. It is manifested in the abandonment of the fallacious smoke and free-and-easy theory by managers of Institutions for working men, and in making education the object to which all else must be subservient. Diverse in operation, it will be best to report upon educational efforts by first dealing with general organisations, and then with particular local action.

*Yorkshire Union of Mechanics' Institutes.*—In order of time, and in the amount of combined work done, this organisation occupies the first place. During the year the Central Committee caused an inquiry to be made respecting the state of scientific education in Yorkshire. On the presentation of the report of the Inquiry the following resolutions were agreed upon:—

"That the Report of the Agent of the Union on Technical Education in Yorkshire be laid before the Government.

"That the Committee, in submitting this Report to the Government, beg to recommend that a Royal Commission or Parliamentary Committee be appointed, to make an inquiry into the present state of Technical Education in this country, and on the Continent, with a view to devising such methods for its improvement in England as may render it more commensurate with the wants and conducive to the prosperity of this great manufacturing country.

"That the Committee think it their duty to draw the special attention of the Government to the want of properly trained and qualified Teachers of Science in this country, and to the consequent inefficiency of the scientific instruction given in Mechanics' and other popular Institutions, and Evening Classes, which are otherwise capable (with efficient teachers) of rendering the most valuable aid to practical science.

"That the Committee would also express their belief that Technical Colleges or Schools, of a superior kind, might with the greatest advantage be established in the principal centres of Manufacturing Industry in the United Kingdom."

The Central Committee have also determined to secure the services of the organising Agent of the Department of Science and Art, so that Elementary Science Classes eligible for State aid may be organised in its Mechanics' Institutes, and to give further assistance to the Local Committees in conducting the same.

*The Yorkshire Board of Education.*—Respecting this Board, the following remarks are made in the 9th volume of the Reports of the Schools Inquiry Commission:—"There is in Yorkshire an active Association, called the West Riding Educational Board. The varied programme of work is being carried out with remarkable energy and success. Its influence in sustaining the life of the various Institutes and Evening Classes of the district has been enormous; and the Board has been scarcely less successful in animating the private schools, since it has been mainly owing to its influence that the Local Examinations of the Universities have been rendered accessible to the schools of the Riding." During the past year this Board has been extended into a County Board, under the patronage of the Duke of Devonshire, Earl Fitzwilliam, Earl de Grey and Ripon, the Earl of Zetland, and Lord Wharnccliffe; and its management vested in a Council, consisting of the leading county magnates. All this extensive educational machinery has its germ in a Local Board of the Society of Arts, established in 1858.

*Free Libraries.*—The multiplication of free public libraries is a good educational omen. At a meeting of burgesses, convened by the mayor of Leeds, in January last, a public library was agreed upon for that town. There is a proposal for the same object under the consideration of the inhabitants of Bradford, Darlington, and Hull.

*National Exhibition of Works of Art at Leeds.*—This exhibition has been projected partly with the object of re-

ducing the debt upon the new infirmary, and partly to establish a permanent gallery of art in Leeds. Whether the pecuniary results will be satisfactory, is an open question; but the educational influence of the exhibition is self-evident. Connected with the exhibition, but under the management of the committee of the Philosophical Society, a series of lectures upon fine art is announced, being the first course of art lectures upon a large scale that has been given in the county.

Individual towns are making individual efforts for advanced education. A legacy of £1,000 has been left to the Institute at Barnsley, by its late president, Wm. Harvey, Esq. The trustees have invested the legacy; and with the income derivable from the investment, classes will be maintained for teaching Art and Design. An elementary drawing class has been commenced. In the autumn, Titus Salt, Esq., offered, through the president of the Mechanics' Institution at Bradford, the sum of £1,000 towards the erection of a new building, to which the president, H. W. Ripley, Esq., added the promise of £500. A few months since the Council of the Philosophical Society suggested the erection of a large building, in which the Mechanics' Institute, the School of Art, a Technical School, and the Philosophical Society might all be accommodated. The matter is still under consideration, and the joint committees hope to carry the project to a successful issue. The Bradford Philosophical Society, in addition to the general objects for which such societies are founded, has recognised "as an educational branch of the Society's work of very special importance" classes for instruction in science. Classes in chemistry, geology, and physiology are now in operation. Mr. Louis C. Miall reports concerning them:—"The most noticeable feature of this year's work is the success of the classes, which is only limited by the small accommodation at present provided. The success of the chemical class has been quite unexpected. I believe we could increase the attendance indefinitely if we had more space. The geological class uses the fossils, minerals, diagrams, microscope, &c., of the society's museum. In this class periodical examinations are held, which have been attended by all the members of the class. The results are, so far, very encouraging, and there is every reason to believe there are a number of young men in Bradford who are studying science thoroughly and efficiently. We intend to start a series of zoological demonstrations on Saturday afternoons." A valuable museum, containing a well-chosen selection of geological specimens, is attached to the society. The Committee of the Huddersfield Mechanics' Institution have opened a class for instruction in the chemistry of dyeing; and the large attendance of students is a proof that scientific studies will commend themselves to young men when they take the direction of special instruction in that which enters into the concerns of business life. The attendance of evening pupils at this institution is not only greater than at any other institution in the county, but the arrangement of study laid down by the executive committee is most judiciously conceived, and is attended with corresponding results. An Industrial and Fine Art Institution is in course of organization at Wakefield. In 1865 an "Industrial and Fine Art Exhibition" was held at Wakefield. So pecuniarily successful was the exhibition that the profits amounted to upwards of £3,000. In conformity with the Literary and Scientific Institutions Act, an institution has been formed for carrying out the following objects:—"The purposes of this institution shall be such of the following as the governing body shall from time to time determine, namely:—a School of Art, a Museum of Industry and Art, and periodical exhibitions for the encouragement of art and industry, and such other of the purposes, not included in the above, as are mentioned in the 33rd Section of the Literary and Scientific Institutions' Act, 1864, which purposes shall be carried out by such means as the governing body shall think best." The Art School has commenced its operations. At

Eccleshill, Rothwell, and Otley, are being erected Mechanics' Institutions, in which class instruction is to form the prominent feature. The new Institution at Guiseley has been opened during the year. By the completion of the new building for the Mechanics' Institution at Leeds, accommodation is provided for art-students and the want of suitable rooms for the drawing classes, so long felt, is now supplied. The proceeds of the successful exhibition at York are to be applied to the promotion of art in that city, which has for some time contained a most efficient school of art.

*The Examinations in Elementary Knowledge*, introduced by the Society of Arts, for evening class pupils over the age of twelve years, increase year by year in popularity and usefulness. The managers of institutions for adult education are unanimous in their testimony to the good results that are produced by these examinations. On March 10th, 11th, and 12th, the examinations were held under the superintendence of the Local Educational Boards of the Institutions at Batley, Brighouse, Eccleshill, Gildersome, Garforth, Hebden-bridge, Holbeck, Huddersfield, Hunslet, Holywell-green, Leeds, Lockwood, Scarborough, Spinkwell-mills, Stockton-on-Tees, Stocksbridge, Wilsden, York. The results of these examinations are given in the table (p. 569,) and show a great advance on the number of adult candidates registered in 1867.

It has been discovered that in preceding years, not only were school-boys admitted in large numbers to the examinations, but the regulation requiring the minimum age of the candidates to be not less than 12 years had been extensively violated, and many were entered whose age did not exceed 9 years. Last year the regulations were rigidly enforced, and the number of *bona-fide* candidates was in excess of those of any preceding year, while at this year's examination a large increase upon 1867 was registered, giving very satisfactory results. The council of the Yorkshire Board of Education have instituted a prize scheme, which, though small in amount, is sufficient to generate a wholesome spirit of emulation among the candidates. To students of the higher grade, over the age of 18 years, three prizes of £2, £1 10s., and £1 are offered; and to students under the age of 18 years, three prizes of £1, 15s., and 10s. A prize of books, to the amount of £1, is also placed at the disposal of the committee of each Institution that presents twenty duly qualified candidates for examination. This year the prize has to be given to the committees of Brighouse, Eccleshill, Holbeck, Huddersfield, Lockwood, Stockton-on-Tees Mechanics' Institution, York Institution of Popular Science, Gildersome Literary Institution, and Garforth Working Men's Club. In addition to these county prizes, almost all the Institutions have a local prize scheme connected with the examinations.

Respecting the final examinations, I have little to report beyond what is contained in the Secretary's tabular statement. While entertaining the utmost loyalty to the scheme, and fully recognising the good it has done, and the multiplication of similar educational machinery it has produced, to which I have already referred, I must confess that I believe the time has arrived for the Council to take a comprehensive survey of the various schemes for adult education now in operation, with the view to the economy of labour, on the one hand, and the extension of educational advantages arising from examinations conducted by a well-qualified body, on the other. The examinations of the Department of Science and Art are rapidly extending, and, with the aid of the annual vote, present advantages that far outweigh the honorary distinctions of the Society of Arts. But though the ground that might be covered with our own scheme is being occupied by that of the Department, I do not suggest the discontinuance of the Final Examinations. By a very slight modification of the system a large area of usefulness yet unoccupied may be opened

up to the Society, and not one advantage now offered to the manual labour class withdrawn. The great want in middle-class education is an examination test within the reach of schoolmasters. This is not yet supplied by the Universities Local Examinations. The fees charged at these examinations exclude a vast number of pupils; and no one so much as the schoolmaster complains of the heavy fee being a bar to the entry of his most qualified pupils. It will be some time before the scheme of county boards, suggested by the Schools Inquiry Commission, will be sufficiently matured. In the meantime the Final Examinations may meet, to a great extent, the want so strongly felt. Without entering into details, I would suggest—

1. That the subjects be spread over six evenings, so as to give a student an opportunity of being examined in six subjects.
2. That the prizes be awarded under the same conditions as heretofore.
3. That a fee of two guineas be paid for each school sending twenty candidates or less to the examination, with an additional fee of one guinea for every ten candidates.
4. That the names of successful candidates from schools be published in a separate list.
5. That the age of candidates be reduced in the case of schoolboys to 13 years.

I have said that the Society has been a "pioneer," opening the way to incalculable beneficial results, and in the future not the least of these results would be the extension of our present system of Examinations to middle-class schools, whose pupils are the sons of the managers and foremen of manufactories, and the employers of labour, who, equally with the artisan population, deserve the consideration of the promoters of Arts, Manufactures, and Commerce. I most earnestly commend this subject to the consideration of the Council.

Mr. Thomas Lawton, of the Union of Lancashire Institutes, writes:—

During the past year I have delivered 37 public addresses, and have thus been enabled to explain to at least 10,000 people the examinations held under the auspices of the Lancashire and Cheshire Union of Institutes. I have visited 20 institutes for special consultation with committees, and have, while inspecting the evening classes of 58 institutes, examined in arithmetic and dictation 3,217 pupils. Two principal facts stand out as the result of my observations:—

1. That both in reference to class instruction and examinations we are effectually laying hold of the "masses."
2. That the average state of the elementary education of the pupils attending the evening classes is so low and defective that little progress can be made at present. The number of failures at my own inspections, and at the elementary examinations is very heavy. Out of the 3,217 pupils examined by myself, 595 were absolutely unable to write down a simple piece dictated to them, and 711 made three mistakes and upwards in spelling. The piece dictated generally consisted of 30 words, equal in difficulty to what would be expected from the third standard in an ordinary day-school; 1,300 were able to put down and work correctly a simple addition sum dictated to them.

The following statistics will further show the operations and position of the Union:—

Income last year, £393 13s. 5d.

Number of Vice-Presidents, each subscribing at least £2 2s. per annum, 104.

*Results of Examinations (Elementary).*

Number of candidates this year ..... 1,335

Number of papers worked ..... 2,800

*Comparative statement of Certificate results.*

|      |     |
|------|-----|
| 1864 | 72  |
| 1865 | 171 |
| 1866 | 373 |
| 1867 | 477 |
| 1868 | 588 |

*Society of Arts' Examination.*

|      |     |
|------|-----|
| 1864 | 247 |
| 1865 | 281 |
| 1866 | 272 |
| 1867 | 379 |
| 1868 | 423 |

*Government Science Examination.*

|      |                     |
|------|---------------------|
| 1864 | 518                 |
| 1865 | 786                 |
| 1866 | 633                 |
| 1867 | 1019                |
| 1868 | (not yet published) |

*Number under instruction in Science Classes for Lancashire and Cheshire.*

|      |      |
|------|------|
| 1867 | 2159 |
| 1868 | 2769 |

Upwards of 20 new Science classes were opened during the past winter. We are making arrangements whereby every Institute in the Union will be enabled to secure instruction for its members in the principal trades of the respective districts.

A gratifying feature in respect of these classes is, that 14 out of the 30 science teachers engaged are or were artisans. I say were, because four of them have proved so successful in their class-work as to have been able to withdraw from their manual labour, and devote themselves exclusively to the profession of science teaching.

**EXTRA PRIZES OF THE UNION.**

Prizes are offered not only to the candidates obtaining the highest aggregate number of marks at the Society of Arts and the Government science examinations respectively; but also to candidates obtaining the highest aggregate number of marks in the following groups of subjects:—

*Group 1.*—Arithmetic; Book-keeping.

*Group 2.*—Electricity and Magnetism; Acoustics, Light and Heat.

*Group 3.*—Geometrical Drawing; Mechanical Drawing; Building Construction; Free-hand Drawing.

*Group 4.*—Mining and Metallurgy; Mineralogy; Geology.

*Group 5.*—Chemistry.

*Group 6.*—Vegetable Physiology; Animal Physiology; Zoology.

*Group 7.*—Domestic Economy; Political and Social Economy.

*Group 8.*—Geography; English History; English Literature; Logic and Mental Science.

*Group 9.*—Mathematics; Theoretical and Practical Mechanics.

*Group 10.*—Languages.

The examination of females in cutting-out and making some useful garment is doing good service. No candidate is allowed to compete unless she has previously obtained an elementary certificate.

The special district prizes of the Society of Arts will, I believe, secure a larger number of candidates in the manufacturing districts. I note with great satisfaction that nearly all our science teachers now recommend their pupils to take the Society of Arts Final Examination Papers.

Mr. F. Talbot, of the South Staffordshire Educational Association, reports as follows:—

*Society of Arts Examinations.*—The operations of the

above association for the year just ended, so far as they relate to the examination scheme of the Society of Arts, have been somewhat on a reduced scale. The number of certificates gained by members of institutions in union with the association is 61, from 10 institutions, against 88 from 11 institutions in 1867. From 1860 to the present time the average annual number of certificates taken has been 60, so that, this year, the average only has been reached. For the first time the association has offered prizes in connection with the Society's scheme. To five pounds offered by the Society, the Earl of Lichfield, a vice-president of the association, has added a like sum, and the Committee decided upon offering three prizes of £5, £3, and £2 respectively, to the three members of Institutions who should secure the 1st, 2nd, and 3rd places in this year's examination, in at least three out of six prescribed subjects, two first-class certificates, at least, being taken in those subjects by each prize-holder. It is to be regretted that not one of these prizes will be taken; and nothing, perhaps, shows more conclusively than this, that our great want throughout the Institutions of this district is that of systematic class instruction in some at least of those subjects of the Society's examinations which have a special value in the general industrial operations of this district. A noticeable feature in the present year's results is, that the pupils of two of the evening schools of the district, St. Peter's, Wolverhampton, and Messrs. Bagnall's, Gold's Hill, have taken between them 28 certificates. This fact is most suggestive as to the direction in which we may begin to look for some of those results, which do not appear as yet to be forthcoming, to any great extent, from the older Institutions.

*Elementary Examinations.*—These Examinations have been this year conducted by our own committee, with our own questions, owing to the Science and Art Department having, unfortunately, fixed the same evenings for their drawing examinations which had been previously appointed by the Society of Arts for these elementary examinations. Forty-three persons out of 55, of the average age of nearly 16½ years, gained Higher Grade Certificates, and 114 out of 210, of the average age of 16½ years, gained Lower Grade Certificates. To show the valuable effect of these examinations upon the elementary education of the young people who work for and attend them, one school, which sent in 32 candidates, gained 31 certificates. There are prizes connected with this scheme to the value of £25. The Examiner to the Association, the Rev. H. Williams, of the Grammar School, Wolverhampton, reports well of the Scripture, Geography, and English History of both Grades, and well also of the Grammar of the Higher and the Arithmetic of the Lower Grade, but badly of the Arithmetic of the Higher Grade. He adds, "no scientific teaching can be of much use to those who are destitute of a thorough knowledge of arithmetic." On the whole examination he reports: "The results are highly encouraging and better than those of last year."

*Special Examinations.*—These Examinations are intended to encourage young persons to attend our night schools, and to persevere in improving the state of their elementary knowledge, between the time of their having received the Higher Grade Elementary Certificate, and their advancing to the study of such special subjects as are prescribed by the Programme of the Society of Arts. Several prizes of one pound each are attached to them, being given by Lord Lyttelton, the President, and several other noblemen and gentlemen of the district. This year 25 candidates passed the various examinations, and have been placed in order of merit. Speaking generally of the results of these examinations, the Examiner reports that the night schools are doing a great work, and deserve every encouragement; further, "There has been a very great improvement effected during the past year."

*Industrial Exhibition for Night Scholars.*—In the autumn of last year the Association organised an exhibi-

tion of industrial work produced by evening scholars. Articles were sent in from twelve schools, to the number of 174. Prizes to the amount of £7 14s. were awarded to the producers of the best articles. Several drawings, one in water-colour, after a sketch by Birket Foster, and some specimens of metal work, were admirably executed, and much of the needlework, both plain and ornamental, received a high degree of praise from the judges. Altogether the attempt was successful, and is to be repeated.

*Athletic Sports Meeting.*—The third annual gathering of evening scholars for athletic sports was held last year in Sandwell-park, kindly lent by the Earl of Dartmouth for the purpose. Upwards of 2,000 persons were present, and the various contests were carried on with excellent spirit during the day. An admirable address, upon "The Right Use of Athletic Sports," was delivered by the Hon. and Rev. W. H. Lyttelton, and the prizes were distributed by Mrs. James T. Chance, at the close of the day, to a very intelligent-looking and enthusiastic set of working boys, in whose looks and demeanour the black country might see everything to inspire its best hopes.

During the year the treasurer of the Association received the sum of £125, being a quarter of the surplus proceeds of the very successful Fine Arts Exhibition which was held at Dudley in the summer of 1866. The committee of the Association is now assisting to organise an Industrial and Fine Arts' Exhibition, to be held in Wolverhampton in the summer of next year, and which, from the way in which it is taken up, bids fair to be equally successful with that at Dudley. It is to comprise a special class for artisans' productions, which are to be executed after prescribed models and conditions, on the plan already carried out by the Society of Arts.

Mr. W. G. Larkins, of the Metropolitan District, reports as follows:—

A gratifying increase in the number of candidates examined in the elementary examinations has taken place this year; an increase the more remarkable, since it has occurred entirely in the lower grade. The number of those who passed is also greater in proportion this year, owing mainly to the fact that the candidates took up more subjects in which to be examined. There is no doubt whatever that these elementary examinations are doing most useful work, not only in preparing candidates for the higher and final examinations of the Society of Arts, but to a far greater extent in testing and confirming the knowledge imparted in the various evening classes and schools of the metropolis. Only a very small proportion of those that pass the lower grade examination have any aims beyond it; the importance, therefore, of fixing the knowledge of the few months of elementary study they undergo is not to be overlooked, and the true success of such elementary examinations is not to be measured by the number of candidates who make them a stepping-stone to something higher. The majority of those candidates who come up to the final examinations are of a totally different stamp from the candidates just mentioned, and thus the elementary and final examinations are thus doing a distinct and important work. With a view to encourage candidates who have passed the elementary examinations to enter upon the final examinations, the Metropolitan Association offered prizes of the total value of £16 to the two male candidates and the two female candidates who should stand highest on the Society of Arts' return. As the conditions of these prizes have scarcely been understood, the result has not been great, but next year it is anticipated that a much larger number will compete for them. In the metropolis there are few institutions that afford facilities at one and the same time for elementary instruction and instruction of a more advanced character. Most institutions and evening classes are frequented by a class of members peculiar to the district in which they are situated, and who, year by



year, maintain the same average intellectual attainments. No comparison can therefore be made between the work done at any one with the work done at any other. Though some classes seem to be achieving a success, marked by the members carrying off prizes and certificates, that success may be after all far less than that achieved by classes whose members are in a different position of life; a position that neither increases their aptitude nor their capability for receiving knowledge. I mention this because the increase in the number of candidates in the Final Examinations, from Institutions that have for years held the Elementary Examinations is not commensurate with the increase in the number of candidates in the latter, and also to show how difficult it is, in giving results, properly to estimate the advance made. The Institutions, generally, seem to be steadily going on. It is worth notice, however, that the greatest activity and proficiency are manifested by those that offer the greatest educational facilities. There is no doubt that the stir that the last year has witnessed, with regard to the education question, has affected all classes, and next year will probably make this more manifest.

#### EXAMINERS' REMARKS.

The Examiner in *Arithmetic* says:—"As a whole, the papers this year show a very marked improvement upon those of last year, many of them showing unmistakable evidence of a correct knowledge of principles and great accuracy in arriving at results."

The Examiner in *Book-keeping* says:—"This year's papers generally show a greater amount of comparative proficiency than those of any former year; it is especially noticeable that the number of candidates who have gained first-class certificates is greater, in proportion to the total number examined, than in either 1866 or 1867."

The Examiner in *Algebra* writes:—"Of the candidates in the examination in this subject about 50 per cent did not pass, but among these were several who seemed to have gone in to the examination without any adequate knowledge or preparation. Of the rest, however, I can report favourably, while of two or three candidates I cannot speak too highly. It would in my opinion be advisable that the candidates in future examinations should be cautioned against sending up mere results without giving the working by which they are obtained."

The Examiner in *Geometry* says:—"The candidates in this subject have on the whole done very well. Some have shown great aptitude in solving geometrical problems, and some of those who have not passed have come very near indeed to the limit. The result is satisfactory. The best candidate showed a remarkable knowledge of geometry."

The Examiner in *Mensuration* says:—"A larger number than usual have been examined this year in mensuration. The paper has been very well done by most of the candidates, if we except the questions on the mensuration of solids. Very few have shown themselves to be 'familiar with the different rules for measuring and estimating artificers' work.' One obtained no marks at all, inasmuch as his answers, which were all wrong, were sent up without his work."

The Examiner in *Trigonometry* says:—"The number of candidates for examination in trigonometry has increased, and the quality of the answers is better than that in the last few years."

The Examiner in *Conic Sections* reports that "the work this year is very creditable to the candidates. One indeed has done remarkably well, and another has shown a knowledge of the principles of projection which is seldom met with. Such work is sufficient to justify the Society in retaining the subject within the range of these which it examines."

The Examiner in the *Principles of Mechanics* says:—

"While much gratified by the increased number of candidates for examination in my department, I regret to observe that many of them have scarcely appreciated the gravity of the examination, for they are either apparently unfit to pass it, or have not bestowed sufficient study in order to master the first principles of the subject on which questions, for the most part of no very high order, but suited to test a respectable acquaintance, have been submitted to them. In contrast with the failure of so many that it has pained the Examiner to review their papers, is to be fairly placed an increase in the number of those who have earned the first and second class certificates of the Society."

The Examiner in *Practical Mechanics* says:—"This has been a most satisfactory examination, as will be seen by the number of certificates awarded."

The Examiner in *Navigation and Nautical Astronomy* says:—"The paper of one of these candidates is remarkably good. He evidently possesses a good knowledge of the subjects. Had he worked out the lunar distance he would have obtained nearly full marks. The other candidate ought not to have presented himself; he is unacquainted with the definitions of Navigation and Nautical Astronomy, and has evidently attempted to work the paper without having devoted to the subject a sufficiency of time to attain any clear idea of what he is about. The candidates (at least one of them) do not seem to understand that only one question in each section is to be worked, and that marks will be given to one only."

The Examiner in *Electricity and Magnetism* "has much pleasure in remarking that among the unusually large number of papers he has received, more attention has been paid than hitherto to the important subject of the mariners' compass and its deviations; but the Electric Telegraph, and especially its mechanism, being the most important practical and commercial bearing of the whole subject, has not generally met with the attention to which it is entitled. He further regrets being compelled to observe, that in some few instances an almost total ignorance of the entire subject has been manifested."

The Examiner in *Light and Heat* says:—"The candidates generally have shown a want of preparation for answering questions in writing, by losing time in uncondensed and superficial discussion; more accurate reading and frequent practice in writing out answers to examination questions are recommended to them."

The Examiner in *Chemistry* says:—"The chemical papers of this year show upon the whole an improvement upon those of last year. They are certainly a good deal better than some years ago."

The Examiner in *Mining and Metallurgy* says:—"The papers are this year very creditable."

The Examiner in *Botany* says:—"Although I can rank but one paper in the first-class, yet, upon the whole, the result of the examination is satisfactory. Attention appears to have been fairly distributed over the general field of botanical science, and one or two of those in the second-class may rank well in the first another year."

The Examiner in *Floriculture* says:—"The replies are this year more intelligibly shaped to meet the questions than on former occasions; but there is, in many cases, great need of improvement in regard to the handwriting and diction. In all the papers there is a manifest deficiency in regard to the correct spelling of the names of plants, the orthography being in some instances quite disgraceful, as *colea* and *coleous* for *c-leus*, *ephyfillum* for *epiphyllum*, *hyasinth* for *hyacinth*, *hoettia* for *hoteia*, *ammeranthus* for *amaranthus*, *camelia* for *camellia*, *Erisina* *erbstei* for *Iresine* *Herbstii*, *heliotrophe* for *heliotrope*, *gauldfusia* for *goldfussia*, &c."

The Examiner in *Fruit and Vegetable Culture* says:—"Not only are the candidates more numerous than on former examinations, but their papers are of a much higher order, and of a quality superior to those which have

TABLE I.  
RESULTS OF THE FINAL EXAMINATION OF 1868.

| NAME OF LOCAL BOARD.                            | No. of Candidates Examined at Previous Examination by Local Board. | No. of Candidates who Passed Previous Examination by Local Board. | No. of Candidates Examined at Final Examination. | No. of Candidates who Passed at Final Examination. | No. of Papers Worked at Final Examination. | No. of First-class Certificates awarded. | No. of Second-class Certificates awarded. | No. of Third-class Certificates awarded. | No. of Prizes awarded to Candidates. | No. of Unsuccessful Candidates. |
|---|--|---|--|--|--|--|---|--|--------------------------------------|---------------------------------|
| Aberdeen ...                                    | 30   | 25  | 15   | 13   | 17   | 3  | 7   | 5  | ...                                  | 2                               |
| Aberington ...                                  | ...  | ...   | 9  | 9  | 20   | 1  | 6   | 11                                       | ...                                  | ...                             |
| Albion Edge ...                                 | 4  | 4   | 5  | 4  | 12   | ...                                      | 4   | 5  | ...                                  | 1                               |
| Alton and Farnham ...                           | 6  | 6   | 7  | 7  | 14   | 4  | 4   | 4  | ...                                  | ...                             |
| Ashford ...                                     | 10   | 9   | 10   | 10   | 12   | 7  | 3   | 2  | ...                                  | ...                             |
| Ashton-under-Lyne ...                           | 2  | 2   | 7  | 4  | 10   | ...                                      | 1   | 5  | ...                                  | 3                               |
| B cup ...                                       | 30   | 30  | 20   | 15   | 36   | 3  | 5   | 13                                       | ...                                  | 5                               |
| Banbury ...                                     | ...  | ...   | 1  | 1  | 1  | ...                                      | 1   | ...                                      | ...                                  | ...                             |
| Belfast (Academy Science School) ...            | 23   | 23  | 23   | 24   | 59   | 8  | 19  | 21                                       | 3                                    | 4                               |
| „ (People's Literary Institute) ...             | 9  | 9   | 11   | 11   | 14   | 6  | 8   | ...                                      | ...                                  | ...                             |
| Bewdley ...                                     | ...  | ...   | 2  | 1  | 2  | ...                                      | ...                                       | 1  | ...                                  | 1                               |
| Birmingham and Midland Institute ...            | 47   | 40  | 46   | 41   | 63   | 9  | 22  | 21                                       | 1                                    | 5                               |
| Blandford ...                                   | ...  | ...   | 1  | 1  | 1  | ...                                      | 1   | ...                                      | ...                                  | ...                             |
| Bolton (Mechanics' Institution) ...             | 7  | 7   | 10   | 4  | 10   | 2  | ...                                       | 2  | ...                                  | 6                               |
| „ (School of Science) ...                       | ...  | ...   | 2  | 13   | 32   | ...                                      | 1   | 12                                       | ...                                  | 13                              |
| Bradford ...                                    | 20   | 17  | 21   | 14   | 30   | 4  | 8   | 11                                       | ...                                  | 7                               |
| Bristol (Young Men's Christian Association) ... | ...  | ...   | 6  | 6  | 10   | 1  | 2   | 7  | ...                                  | ...                             |
| Bromley Kent ...                                | 3  | 3   | 2  | 2  | 4  | ...                                      | 1   | 3  | ...                                  | ...                             |
| Brompton (New) ...                              | 19   | 17  | 8  | 1  | 8  | ...                                      | ...                                       | 1  | ...                                  | ...                             |
| Burnley ...                                     | 24   | 20  | 20   | 18   | 30   | 3  | 4   | 13                                       | ...                                  | 2                               |
| Burrough-road School (Plumstead) ...            | 26   | 21  | 33   | 11   | 38   | ...                                      | 2   | 9  | ...                                  | 27                              |
| Bury (Lancashire) ...                           | 20   | 18  | 23   | 7  | 26   | 1  | 1   | 6  | ...                                  | 16                              |
| Carlisle (Mechanics' Institute) ...             | 3  | 3   | 8  | 7  | 8  | 1  | 5   | 1  | ...                                  | 1                               |
| Chatham, &c. ...                                | ...  | ...   | 2  | 2  | 3  | 1  | 1   | 1  | ...                                  | ...                             |
| „ (St. Mary's Science School) ...               | 30   | 30  | 13   | ...  | 13   | ...                                      | ...                                       | ...                                      | ...                                  | 13                              |
| Chelmsford ...                                  | 6  | 4   | 9  | 7  | 9  | ...                                      | 3   | 4  | ...                                  | 2                               |
| Cheltenham ...                                  | 2  | 2   | 2  | 2  | 6  | ...                                      | 1   | 3  | ...                                  | ...                             |
| Chorley ...                                     | 9  | 9   | 11   | 9  | 16   | 3  | 5   | 6  | ...                                  | 2                               |
| Christchurch ...                                | ...  | ...   | 2  | 2  | 2  | ...                                      | ...                                       | 2  | ...                                  | ...                             |
| Citheeoe ...                                    | ...  | ...   | 3  | 2  | 3  | 1  | ...                                       | 1  | ...                                  | ...                             |
| Comp-tall ...                                   | 25   | 25  | 19   | 3  | 23   | 1  | 1   | 3  | ...                                  | 16                              |
| Cork (Catholic Young Men's Society) ...         | 10   | 9   | 7  | 6  | 10   | 3  | 3   | 2  | ...                                  | 1                               |
| Crews ...                                       | 13   | 12  | 14   | 8  | 20   | ...                                      | 3   | 6  | ...                                  | 6                               |
| Dean Mills (near Bolton) ...                    | ...  | ...   | 1  | 1  | 3  | ...                                      | ...                                       | 2  | ...                                  | ...                             |
| Denton and Haughton ...                         | 19   | 19  | 15   | 3  | 24   | ...                                      | ...                                       | ...                                      | ...                                  | 12                              |
| Deptford ...                                    | 8  | 8   | 10   | 10   | 20   | 3  | 7   | 6  | ...                                  | 2                               |
| Derby ...                                       | ...  | ...   | 6  | 6  | 10   | 3  | 2   | 5  | ...                                  | ...                             |
| Devonport ...                                   | 18   | 18  | 22   | 20   | 39   | 17                                       | 13  | 4  | ...                                  | 7                               |
| Droylsden ...                                   | 28   | 28  | 27   | 7  | 35   | 1  | 3   | 6  | ...                                  | 20                              |
| Dudley (Mechanics' Institution) ...             | 9  | 9   | 9  | 5  | 9  | 1  | 1   | 3  | ...                                  | 4                               |
| Earlston ...                                    | 17   | 15  | 10   | 4  | 13   | ...                                      | ...                                       | 4  | ...                                  | 6                               |
| Eccleshill ...                                  | 1  | 1   | 3  | 3  | 3  | ...                                      | ...                                       | 2  | ...                                  | ...                             |
| Edinburgh (Watt Institute) ...                  | 10   | 10  | 12   | 11   | 19   | 7  | 4   | 5  | ...                                  | 1                               |
| Fairsworth ...                                  | 5  | 5   | 5  | 5  | 5  | ...                                      | ...                                       | ...                                      | ...                                  | 5                               |
| Faversham ...                                   | ...  | ...   | 2  | 2  | 5  | ...                                      | ...                                       | ...                                      | ...                                  | ...                             |
| Freetown (Glossop) ...                          | 1  | 1   | 5  | 4  | 6  | 2  | ...                                       | ...                                      | ...                                  | 1                               |
| Galgate ...                                     | ...  | ...   | 2  | 1  | 3  | ...                                      | ...                                       | 2  | ...                                  | ...                             |
| Gilford ...                                     | ...  | ...   | 2  | 2  | 2  | 1  | 1   | ...                                      | ...                                  | ...                             |
| Glasgow (Athensium) ...                         | 46   | 39  | 40   | 37   | 46   | 4  | 13  | 23                                       | 2                                    | 3                               |
| „ (Institution) ...                             | 4  | 4   | 5  | 5  | 5  | 1  | 2   | 2  | ...                                  | ...                             |
| „ (Mechanics' Institution) ...                  | 60   | 54  | 56   | 49   | 62   | 9  | 26  | 19                                       | 2                                    | 7                               |
| „ (Pop. Evg. Classes, Anderson, Univ.) ...      | 64   | 55  | 58   | 55   | 67   | 5  | 15  | 42                                       | 1                                    | 3                               |
| „ (Tonic Sol-fa Society) ...                    | 30   | 28  | 30   | 18   | 30   | 2  | 6   | 10                                       | ...                                  | 12                              |
| Glodwick and Analytic Institution) ...          | 43   | 41  | 39   | 7  | 44   | ...                                      | ...                                       | 8  | ...                                  | 32                              |
| Gloucester (Free Library) ...                   | ...  | ...   | 23   | 12   | 35   | ...                                      | 1   | 12                                       | ...                                  | 14                              |
| Gulaboro (Yorkshire) ...                        | ...  | ...   | 1  | 1  | 1  | ...                                      | ...                                       | 1  | ...                                  | ...                             |
| Halfax (Mechanics' Institution) ...             | 34   | 34  | 23   | 10   | 34   | ...                                      | 1   | 12                                       | ...                                  | 13                              |
| „ (Working Men's College) ...                   | 30   | 27  | 35   | 35   | 45   | 4  | 16  | 19                                       | 1                                    | ...                             |
| Handsworth ...                                  | 15   | 15  | 7  | 5  | 8  | ...                                      | 3   | 2  | ...                                  | 2                               |
| Hastingsden ...                                 | ...  | ...   | 6  | 3  | 12   | ...                                      | 2   | 3  | ...                                  | 3                               |
| Hastings and St. Leonard's ...                  | ...  | ...   | 5  | 5  | 7  | 1  | 4   | 2  | ...                                  | ...                             |
| Hertford ...                                    | 2  | 2   | 3  | 3  | 3  | ...                                      | 2   | 1  | ...                                  | ...                             |
| Heywood ...                                     | ...  | ...   | 10   | 3  | 10   | ...                                      | 3   | 3  | ...                                  | 7                               |
| Holbeck ...                                     | ...  | ...   | 5  | 5  | 15   | 2  | 3   | 6  | ...                                  | ...                             |
| Holywell Green (near Halifax) ...               | 3  | 3   | 6  | 5  | 7  | 1  | ...                                       | 4  | ...                                  | 1                               |
| Huddersfield ...                                | 6  | 6   | 13   | 11   | 19   | ...                                      | 12  | 2  | ...                                  | 2                               |
| Hull ...  | 4  | 4   | 6  | 5  | 7  | 3  | 3   | ...                                      | ...                                  | 1                               |
| Hulme (Working Men's Institute) ...             | ...  | ...   | 13   | 9  | 13   | 1  | 1   | 6  | 1                                    | 4                               |
| Hyde ...  | 6  | 6   | 5  | 2  | 9  | ...                                      | ...                                       | 3  | ...                                  | 3                               |
| Ipswich ...                                     | 14   | 12  | 10   | 10   | 14   | 7  | 2   | 5  | ...                                  | ...                             |
| King's Lynn ...                                 | ...  | ...   | 3  | 3  | 4  | 1  | 1   | 1  | ...                                  | ...                             |
| King's Lynn ...                                 | 6  | 6   | 7  | 5  | 10   | 4  | 2   | 1  | ...                                  | 2                               |
| Lancashire and Cheshire Union ...               | 12   | 12  | 11   | ...  | 12   | ...                                      | ...                                       | ...                                      | ...                                  | 11                              |
| Lancaster ...                                   | ...  | ...   | 18   | 10   | 21   | ...                                      | 2   | 9  | ...                                  | 8                               |
| Leeds (Church Institute) ...                    | 6  | 5   | 6  | 5  | 10   | 3  | 1   | 3  | ...                                  | 1                               |
| „ (Mechanics' Institution) ...                  | 30   | 30  | 33   | 25   | 57   | 5  | 16  | 21                                       | 2                                    | 8                               |
| „ (Young Men's Christian Association) ...       | 17   | 13  | 8  | 8  | 12   | 2  | 4   | 5  | ...                                  | ...                             |
| Lichfield ...                                   | 3  | 3   | 7  | 6  | 9  | 1  | 3   | 3  | ...                                  | 1                               |
| Liverpool Institute ...                         | 37   | 37  | 30   | 27   | 58   | 6  | 12  | 18                                       | ...                                  | 3                               |
| Lomeshaye (Evening School) ...                  | 10   | 10  | 12   | 8  | 12   | ...                                      | 2   | 6  | ...                                  | 4                               |

\* These Candidates were examined at the Manchester Mechanics' Institution.

TABLE I.—(CONTINUED).

| NAME OF LOCAL BOARD.                        | No. of Candidates Examined at Final Examination by Local Board. | No. of Candidates who Passed Previous Examination by Local Board. | No. of Candidates Examined at Final Examination. | No. of Candidates who Passed at Final Examination. | No. of Papers Worked at Final Examination. | No. of First-class Certificates awarded. | No. of Second-class Certificates awarded. | No. of Third-class Certificates awarded. | No. of Prizes awarded to Candidates. | No. of Unsuccessful Candidates. |
|---|---|---|--|--|--|--|---|--|--------------------------------------|---------------------------------|
| London (Beauvoir College) ...               | 16  | 16  | 18   | 18   | 18   | 9  | 9   | ...                                      | 2                                    | ...                             |
| " (City of London College) ...              | 48  | 44  | 57   | 52   | 78   | 25                                       | 21  | 24                                       | 5                                    | 5                               |
| " (Royal Polytechnic Institution) ...       | 24  | 23  | 31   | 27   | 54   | 13                                       | 15  | 20                                       | 10                                   | 4                               |
| " (Metropolitan Association):—              |   |   |  |  |  |  |   |  |                                      |                                 |
| (Birkbeck Lit. and Scien. Inst.)...         | 29  | 25  | 37   | 36   | 54   | 18                                       | 22  | 12                                       | 7                                    | 1                               |
| (Lambeth Evening Classes) ...               | 98  | No return   | 29   | 25   | 40   | 4  | 8   | 12                                       | ...                                  | 4                               |
| (St. Stephen's, Westminster) ...            | 11  | 11  | 5  | 5  | 11   | ...                                      | 4   | 3  | ...                                  | ...                             |
| (Stepney Deanery) ...                       | 11  | 9   | 7  | 6  | 7  | ...                                      | 5   | 1  | ...                                  | 1                               |
| Louth ...                                   | 2   | 2   | 2  | 2  | 2  | ...                                      | 1   | 1  | ...                                  | ...                             |
| Macclesfield ...                            | ...   | ...   | 5  | 2  | 6  | ...                                      | 1   | 2  | ...                                  | 3                               |
| Malvern ...                                 | ...   | ...   | 6  | 6  | 10   | 2  | 4   | 2  | ...                                  | ...                             |
| Manchester (Mechanics' Institution) ...     | 88  | 79  | 64   | 48   | 92   | 11                                       | 29  | 28                                       | 1                                    | 16                              |
| Marple ...                                  | 1   | 1   | 1  | 1  | 1  | ...                                      | ...                                       | 1  | ...                                  | ...                             |
| Middlebro' ...                              | ...   | ...   | 4  | 3  | 4  | ...                                      | 2   | 1  | ...                                  | 1                               |
| Mossley ...                                 | ...   | ...   | 5  | 5  | 5  | ...                                      | 5   | ...                                      | ...                                  | ...                             |
| Newcastle (Church of England Institute) ... | 1   | 1   | 2  | 2  | 3  | ...                                      | 1   | 2  | ...                                  | ...                             |
| New Mills ...                               | 8   | 8   | 10   | 4  | 14   | ...                                      | 1   | 5  | ...                                  | 6                               |
| New Swindon ...                             | 26  | 16  | 15   | 13   | 17   | 1  | 7   | 7  | ...                                  | 2                               |
| Oldbury ...                                 | 5   | 5   | 5  | 2  | 5  | ...                                      | 1   | 1  | ...                                  | 3                               |
| Oldham (Lyceum) ...                         | 30  | 30  | 29   | 11   | 43   | 2  | 5   | 9  | ...                                  | 18                              |
| Padiham (Evening School) ...                | ...   | ...   | 4  | 2  | 4  | ...                                      | ...                                       | 2  | ...                                  | 2                               |
| Paisley (Artisans' Institution) ...         | 6   | 6   | 16   | 13   | 20   | 4  | 6   | 7  | ...                                  | 3                               |
| Parsonstown ...                             | 11  | 10  | 8  | 7  | 14   | 2  | 5   | 5  | ...                                  | 1                               |
| Patricroft ...                              | 12  | 12  | 8  | 5  | 8  | ...                                      | 2   | 3  | ...                                  | 3                               |
| Pembroke Dock ...                           | 10  | 10  | 10   | 10   | 14   | 8  | 4   | 2  | ...                                  | ...                             |
| Portsmouth ...                              | 6   | 6   | 12   | 11   | 26   | 10                                       | 12  | 3  | 2                                    | 1                               |
| Preston ...                                 | 70  | 70  | 20   | 12   | 30   | 2  | 3   | 10                                       | ...                                  | 8                               |
| Redditch ...                                | ...   | ...   | 4  | 4  | 5  | 1  | ...                                       | 4  | ...                                  | ...                             |
| Richmond (Surrey) ...                       | 7   | 7   | 8  | 8  | 18   | 6  | 10  | 1  | 9                                    | ...                             |
| Rugby ...                                   | 15  | 14  | 16   | 15   | 28   | 4  | 14  | 9  | ...                                  | 1                               |
| St. Helen's (Lancashire) ...                | 13  | 10  | 3  | 3  | 3  | ...                                      | ...                                       | 3  | ...                                  | ...                             |
| Salford (Working Men's College) ...         | 30  | 30  | 63   | 42   | 68   | 10                                       | 26  | 18                                       | 1                                    | 11                              |
| Scarborough ...                             | 4   | 4   | 4  | 3  | 4  | ...                                      | 2   | 1  | ...                                  | 1                               |
| Sheerness Dockyard ...                      | 32  | 29  | 25   | 21   | 44   | 4  | 16  | 15                                       | ...                                  | 4                               |
| Slough ...                                  | 4   | 4   | 3  | 2  | 3  | ...                                      | ...                                       | 2  | ...                                  | 1                               |
| Southampton ...                             | 26  | 25  | 22   | 20   | 38   | 8  | 16  | 9  | 2                                    | 2                               |
| Southport ...                               | 1   | 1   | 1  | 1  | 1  | ...                                      | 1   | ...                                      | ...                                  | ...                             |
| Stockport ...                               | 25  | 25  | 25   | 12   | 32   | 4  | 3   | 7  | 1                                    | 13                              |
| Stockton-on-Tees ...                        | 3   | 2   | 2  | 2  | 4  | ...                                      | ...                                       | 3  | ...                                  | ...                             |
| Stourbridge ...                             | 3   | 3   | 2  | 1  | 2  | ...                                      | 1   | ...                                      | ...                                  | 1                               |
| Tottingham ...                              | 3   | 2   | 3  | 2  | 4  | 1  | 1   | 1  | ...                                  | 1                               |
| Wakefield ...                               | 7   | 7   | 4  | 2  | 4  | ...                                      | 1   | 1  | ...                                  | 2                               |
| Walsall (Church Institute) ...              | ...   | ...   | 2  | 2  | 2  | ...                                      | 1   | 1  | ...                                  | ...                             |
| Widnesbury ...                              | 19  | 18  | 9  | 4  | 17   | ...                                      | 3   | 6  | ...                                  | 5                               |
| Werneth (Mechanics' Institution) ...        | ...   | ...   | 2  | 1  | 2  | ...                                      | ...                                       | 1  | ...                                  | 1                               |
| West Bromwich (Gold's Hill) ...             | 7   | 7   | 11   | 10   | 19   | 1  | 5   | 7  | 1                                    | 1                               |
| Whaleybridge ...                            | ...   | ...   | 4  | ...  | 4  | ...                                      | ...                                       | ...                                      | ...                                  | 4                               |
| Woolwich (Royal Arsenal) ...                | 50  | 49  | 27   | 78   | 1  | 12                                       | 18  | ...                                      | ...                                  | 22                              |
| " (St. Thomas's Schools) ...                | 69  | 66  | 54   | 22   | 63   | 1  | 5   | 21                                       | ...                                  | 35                              |
| " (Western Mission Science School) ...      | 8   | 7   | 8  | 3  | 8  | ...                                      | 1   | 2  | ...                                  | 5                               |
| Wolverhampton ...                           | 4   | 2   | 14   | 13   | 22   | ...                                      | 5   | 13                                       | ...                                  | 1                               |
| Worcester (Catholic Institute) ...          | 2   | 2   | 2  | 1  | 4  | ...                                      | 3   | ...                                      | ...                                  | 1                               |
| " (Mutual Improvement Society) ...          | ...   | ...   | 2  | 2  | 3  | 2  | ...                                       | 1  | ...                                  | ...                             |
| " (Railway Literary Institute) ...          | 3   | 3   | 3  | 3  | 7  | 1  | 4   | 2  | ...                                  | ...                             |
| York ...                                    | 5   | 5   | 16   | 14   | 24   | ...                                      | 3   | 12                                       | ...                                  | 2                               |
| Totals ...                                  | 1,844   | 1,596   | 1,842  | 1,308  | 2,547                                      | 318                                      | 608                                       | 801                                      | 65                                   | 534                             |

Number of Local Boards, 135.

been submitted to me on previous occasions. It will be observed that while there are four who have passed in the first-class, there is but one who has come out third, and none in the class of 'not passed.' I have to observe further that, in subjects relating to culture, the answers are generally good; but in almost all cases, where those under consideration are the identification and nomenclature of the different varieties of fruits and vegetables, there is a great deficiency. I would therefore urge on candidates to study the individual characteristics of both fruits and vegetables, so that they may be able readily to distinguish one variety from another, and to acquaint themselves with the conditions under which the numerous varieties are known to succeed best."

The Examiner in *Animal Physiology* says:—"The characters of this year's papers were very much the same as those of last year. There was the same display of technical terms, often incorrect, and very frequently

quite irrelevant to the question, and the same bad spelling of common words. Though a larger number of papers were sent in, the best papers of this year were not so good as those of last year."

The Examiner in *Domestic Economy* says:—"Some of the papers are remarkably well done, and show a very comprehensive knowledge of the subject; but a large proportion of them betray a lamentable deficiency in primary education and the power of literary composition. I have never met with exercises written for an examination which displayed such bad spelling."

The Examiner in *Political and Social Economy*, in speaking of the two papers for which prizes have been awarded, says:—"The first is a remarkable paper, and the second is very good."

The Examiner in *Geography* says:—"The average merit of the first and second class answers fully equals, and perhaps surpasses that of the correspond-

ing papers of former years. But those of only third-class merit are numerous, and the number of failures is large. I feel sure that in many cases the failure is due not so much to mere want of sufficient preparation as to absence of a thoughtful appreciation of the real nature of the task undertaken. In the case of the greater number of failures (and in not a few of those ranked as "third-class") the candidates seem to have supposed a mere schoolboy treatment of the subject to involve all that was required; and no preparation for any higher test than would be applied to ordinary school geography—and that of a very elementary kind—appears to have been resorted to. If the candidates were to examine more fully the conditions of the programme issued by the Society, and paid stricter attention to its injunctions and recommendations, they would stand a better chance of successful competition for the higher honours at its disposal. I venture to suggest whether more might not be done through the medium of the preliminary examinations, in furtherance of such a purpose. I can only repeat what I have urged on former occasions—that methodised study, with the aid of good appliances, directed persistently (for at least some length of time) to a definite object, can alone lead to the desired result. Mere generalities and loose scraps of information will not suffice. Geography is nothing if it be not precise

and exact in detail, as well as comprehensive in its scope."

The Examiner in *English History* says:—"The papers are not equal to the average of last year; and I regret to state that they contain more numerous instances of flagrant bad spelling than on any previous occasion. I think the different secretaries of the Institutions in Union with the Society of Arts should have their attention called to the fact that the candidates, in gathering up their papers, do not always put them together with due regard to the pagination. The consequence is that the Examiner is under the necessity of rearranging the papers of some of the candidates, which is at times very perplexing."

The Examiner in *English Literature* says:—"The work of the present year does not on the whole fall below the average of past years, but there is not so large a proportion of candidates in the first class as on some previous occasions."

The Examiner in *Logic and Mental Science* says:—"The papers show a general improvement on those of the last two or three years. There is only one exhibiting the decided inferiority I before noticed, whilst two or three of the papers are highly creditable."

The Examiner in *Latin and Roman History* says:—"The Latin was fairly done this year; the translations

TABLE II.  
NUMBER OF PAPERS WORKED IN EACH SUBJECT IN THE FOUR LAST YEARS; WITH THE RESULT FOR THE YEAR 1868.

| SUBJECTS.                            | 1865. | 1866. | 1867. | 1868.                 |                                  |                                   |                                  |   |
|--------------------------------------|-------|-------|-------|-----------------------|----------------------------------|-----------------------------------|----------------------------------|---|
|                                      |       |       |       | No. of Papers Worked. | No. of First-class Certificates. | No. of Second-class Certificates. | No. of Third-class Certificates. | No. of Papers in respect of which no Certificate was awarded. |
| Arithmetic .. .. .                   | 446   | 383   | 520   | 528                   | 128                              | 160                               | 147                              | 93  |
| Book-keeping .. .. .                 | 275   | 209   | 235   | 255                   | 62                               | 90                                | 86                               | 17  |
| Algebra .. .. .                      | 68    | 65    | 87    | 76                    | 6                                | 12                                | 19                               | 39  |
| Geometry .. .. .                     | 26    | 30    | 41    | 36                    | 4                                | 7                                 | 17                               | 8   |
| Mensuration .. .. .                  | 43    | 40    | 55    | 78                    | 9                                | 28                                | 22                               | 19  |
| Trigonometry .. .. .                 | 10    | 9     | 9     | 20                    | 2                                | 3                                 | 5                                | 10  |
| Conic Sections .. .. .               | 1     | 7     | 8     | 5                     | 1                                | 2                                 | 2                                | ..  |
| Navigation, &c. .. .. .              | 4     | 2     | 1     | 2                     | 1                                | ..                                | ..                               | 1   |
| Principles of Mechanics .. .. .      | 11    | 16    | 27    | 52                    | 4                                | 5                                 | 3                                | 40  |
| Practical Mechanics .. .. .          | 15    | 18    | 38    | 53                    | 1                                | 21                                | 22                               | 9   |
| Magnetism, Electricity, &c. .. .. .  | 19    | 8     | 32    | 41                    | 1                                | 5                                 | 16                               | 19  |
| Light and Heat .. .. .               | 7     | 7     | 35    | 28                    | ..                               | 7                                 | 11                               | 10  |
| Chemistry .. .. .                    | 107   | 80    | 76    | 92                    | 12                               | 27                                | 33                               | 20  |
| Animal Physiology .. .. .            | 84    | 48    | 45    | 121                   | ..                               | 14                                | 85                               | 22  |
| Botany .. .. .                       | 12    | 19    | 16    | 16                    | 1                                | 4                                 | 4                                | 7   |
| Floriculture .. .. .                 | ..    | 6     | 9     | 16                    | 3                                | 10                                | 3                                | ..  |
| Fruit and Vegetable Culture .. .. .  | ..    | 8     | 9     | 13                    | 4                                | 8                                 | 1                                | ..  |
| Mining and Metallurgy .. .. .        | 6     | 3     | 1     | 1                     | 1                                | ..                                | ..                               | ..  |
| Political and Social Economy .. .. . | 5     | 6     | 8     | 7                     | 2                                | ..                                | 3                                | 2   |
| Domestic Economy .. .. .             | 13    | 6     | 34    | 32                    | 8                                | 5                                 | 6                                | 13  |
| Geography .. .. .                    | 87    | 86    | 98    | 114                   | 14                               | 31                                | 38                               | 31  |
| English History .. .. .              | 94    | 78    | 86    | 99                    | 6                                | 31                                | 34                               | 28  |
| English Literature .. .. .           | 30    | 39    | 29    | 33                    | 3                                | 12                                | 13                               | 5   |
| Logic and Mental Science .. .. .     | 15    | 8     | 4     | 9                     | 2                                | 3                                 | 3                                | 1   |
| Latin and Roman History .. .. .      | 9     | 9     | 9     | 21                    | 2                                | 10                                | 7                                | 2   |
| French .. .. .                       | 99    | 116   | 118   | 148                   | 10                               | 20                                | 65                               | 53  |
| German .. .. .                       | 19    | 10    | 12    | 16                    | 2                                | 2                                 | 9                                | 3   |
| Italian .. .. .                      | 4     | 5     | 2     | 3                     | ..                               | 1                                 | 2                                | ..  |
| Spanish .. .. .                      | 10    | 6     | 6     | 6                     | 1                                | 4                                 | 1                                | ..  |
| Free-hand Drawing .. .. .            | 56    | 55    | 85    | 108                   | 7                                | 41                                | 46                               | 14  |
| Geometrical Drawing .. .. .          | 128   | 132   | 240   | 421                   | ..                               | 19                                | 68                               | 334   |
| Music .. .. .                        | 40    | 39    | 71    | 97                    | 21                               | 26                                | 30                               | 20  |
| Totals .. .. .                       | 1,744 | 1,571 | 2,050 | 2,547                 | 318                              | 608                               | 801                              | 820   |

might have been put into better English, and the syntactical parsing might have been fuller, but the usual standard was well maintained on the whole."

The Examiner in *French* says:—"The papers are on the whole very fairly satisfactory, and I have much pleasure in recommending 95 candidates for certificates. But the proportion of decidedly good papers is below the average of former years. The translation of English into French continues the weakest part, and bears throughout the evidence of extremely superficial study. In some groups of papers, all bearing a strong family likeness, it is grievous to notice the effects of that cramming system which has lately crept into so many school-rooms, and which it is the duty of all earnest educators to denounce and discourage. I would again warn the candidates, and especially their teachers, that two or three foolscap sheets of ready-made literature, and 'cut and dried' history, however accurately got up, cannot secure any great number of marks when, of all the grammatical questions in the same paper, not one is correctly answered, or when nearly every word in the translation is an offence against one or other of the most elementary rules of the language. Candidates aiming at a first-class certificate in French, ought at least to know how to spell, *inter-alia*, the name of the sovereign whose life they are sketching. In one such paper the name of the hero of the Carolingian dynasty is murdered throughout into Charleimage. Nor does the mother-tongue fare better at the hands of most candidates and one pretentious paper is headed '(Grammar *sic*).'"

The Examiner in *German* says:—"The direction, how much of the different sections of the paper was to be worked out by each candidate, has not been strictly adhered to by some. Only three candidates have tried to render the German idioms into English. The essay has been well-handled by one candidate. Unfortunately, some of the candidates, not having seen the Kensington Museum, were unable to describe a visit there; one of them, however, substitutes a visit to Peel-park, Manchester, the description of which is of equal merit."

The Examination in *Italian* says:—"In the papers for this year, whilst I discover some small improvement over those of last year, as regards grammatical rules, I find evidence still of sensible deficiency with respect to forms of expression and the construction of Italian. More extended reading is also absolutely necessary."

The Examiner in *Spanish* says:—"Some improvement is evinced in the Spanish papers this year as compared with the preceding, notwithstanding four of the candidates show themselves defective in the rules of grammar in the translation from English into Spanish, which can be removed by a careful attention to syntax."

The Examiner in *Freehand Drawing* says:—"There is a great increase in the number of candidates this year, and the work done is rather above the average. The answers to the question relating to the proportions of the human figure are much more satisfactory than those of last year—18 out of 109 having given correct replies."

The Examiner in *Geometrical Drawing* says:—"The examination in Practical Geometry this year has been very unsatisfactory, especially as compared with that of last year. The two papers were as nearly as could be of the same extent, and both extremely elementary. The two results are, in 1867, about 80 per cent. gained a first or second class—about 40 failed to pass; in 1868, only 16 per cent. have gained a second class, and only one candidate has obtained a first class—no less than 334 out of 421 have failed to pass. I might almost use the very same expressions on this occasion that I did last year, in commenting on the causes of this extraordinary result; even the plane geometry is greatly inferior, and the drawing not so good; but of any knowledge of the geometry of the plane and line in combination there is little indication, and there is a reckless neglect or misconception of the conditions of the question."

The Examiner in *Music* says:—"On the whole the papers are inferior to those of many former years. Of ninety-seven

papers I have been enabled to place only twenty-one in the first class. In the others (even in some of the second class), there are many examples of simple processes done in a very slovenly way; e.g., putting compressed into full score, showing imperfect knowledge of the theory of the stave. Some candidates still attempt the harmony and counterpoint questions, evidently without having had the slightest preparation for them. In some of the 'non-passed' papers (twenty in number) not a single question has been answered correctly. In 'musical history' there is considerable improvement."

TABLE III.

This Table shows the ages of the 2162 Candidates from whom return papers were received. Of these, 1835 underwent the Final Examination.

| Age.     | No. of Candidates. | Age.        | No. of Candidates. |
|----------|--------------------|-------------|--------------------|
| 16 ..... | 251                | 31 .....    | 23                 |
| 17 ..... | 279                | 32 .....    | 11                 |
| 18 ..... | 283                | 33 .....    | 20                 |
| 19 ..... | 246                | 34 .....    | 13                 |
| 20 ..... | 207                | 35 .....    | 14                 |
| 21 ..... | 176                | 36 .....    | 6                  |
| 22 ..... | 140                | 37 .....    | 7                  |
| 23 ..... | 105                | 38 .....    | 9                  |
| 24 ..... | 85                 | 39 .....    | 2                  |
| 25 ..... | 68                 | 40 .....    | 6                  |
| 26 ..... | 57                 | 41 .....    | 2                  |
| 27 ..... | 42                 | 42 .....    | 4                  |
| 28 ..... | 38                 | 43 .....    | 1                  |
| 29 ..... | 36                 | 46 .....    | 1                  |
| 30 ..... | 30                 |             |                    |
|          |                    | Total ..... | 2,162              |

TABLE IV.

OCCUPATIONS, PRESENT OR PROPOSED, OF THE 2,162 CANDIDATES FROM WHOM RETURN PAPERS WERE RECEIVED:—

|                             |    |                        |     |
|-----------------------------|----|------------------------|-----|
| Accountants (and Clerks) .. | 5  | Cabinet-case makers .. | 3   |
| Agents .. .. .              | 3  | Cabinet-makers .. ..   | 12  |
| Ammunition maker .. ..      | 1  | Calenderer .. .. .     | 1   |
| Architects .. .. .          | 12 | Calico-printers .. ..  | 2   |
| " Clerks .. .. .            | 3  | Caligrapher .. .. .    | 1   |
| Army accoutrement ..        | 1  | Card-makers .. .. .    | 2   |
| " maker .. .. .             | 1  | Carder .. .. .         | 1   |
| Artist .. .. .              | 1  | Carpenters .. .. .     | 28  |
| Assistants—Broker's ..      | 1  | Cartridge-maker .. ..  | 1   |
| " Cook's .. .. .            | 1  | Carver and gilder ..   | 1   |
| " Editor .. .. .            | 1  | Cashiers .. .. .       | 2   |
| " Laboratory ..             | 3  | Caulkers .. .. .       | 2   |
| " to a provision ..         | 1  | Chaser .. .. .         | 1   |
| " dealer .. .. .            | 1  | Cheesefactor .. .. .   | 1   |
| " Surveyor of ..            | 1  | Chemists .. .. .       | 9   |
| " taxes .. .. .             | 1  | " and Dentist ..       | 1   |
| Bakers .. .. .              | 3  | " and Druggists ..     | 13  |
| Blacksmiths .. .. .         | 10 | " Photographic ..      | 1   |
| Block-cutter .. .. .        | 1  | China-packer .. .. .   | 1   |
| Boat-builder .. .. .        | 1  | Civil Engineers .. ..  | 5   |
| Boiler-makers .. .. .       | 4  | " Service .. .. .      | 1   |
| Book-binder .. .. .         | 1  | Clerks—Bankers', Com-  |     |
| " keepers .. .. .           | 63 | " mercial, &c. ..      | 454 |
| " sellers .. .. .           | 2  | " Builders' .. .. .    | 2   |
| Boot and shoe-makers ..     | 9  | " Colliery .. .. .     | 1   |
| Brass-finishers .. .. .     | 3  | " Corresponding ..     | 2   |
| " founder .. .. .           | 1  | " Customs' .. .. .     | 2   |
| " turners .. .. .           | 2  | " Gas-works' .. ..     | 2   |
| Brazier .. .. .             | 1  | " Engineer's .. ..     | 1   |
| Bricklayers .. .. .         | 6  | " Estate agents' ..    | 2   |
| Brickmaker .. .. .          | 1  | " Insurance .. ..      | 3   |
| Broker (ship-insurance) ..  | 1  | " Law, &c. .. ..       | 23  |
| Brush-maker .. .. .         | 1  | " Ordnance Sur-        |     |
| Builder .. .. .             | 1  | " vey .. .. .          | 2   |
| Butchers .. .. .            | 2  | " Poor-law .. ..       | 1   |
|                             |    | " Post-office .. ..    | 1   |

|                             |                              |                            |                          |
|-----------------------------|------------------------------|----------------------------|--------------------------|
| „ Railway .. .. 16          | Grocers and assistants .. 16 | Piecers .. .. 8            | Stereotyper .. .. 1      |
| „ Short-hand .. 1           | Gunmaker .. .. 1             | Plan-tracer .. .. 1        | Stone-masons .. .. 10    |
| „ Surveyors' .. 2           |                              | Planers .. .. 4            | Store-keepers .. .. 2    |
| „ Telegraph .. 1            | Hammerman .. .. 1            | Plate-layer .. .. 1        | Student in Arts .. .. 1  |
| Clogger .. .. 1             | Harness-maker .. .. 1        | Plumber, &c. .. .. 1       | Stuff-trade, in the .. 1 |
| Cloth-dresser .. 1          | Hatters .. .. 5              | Pocket-book makers .. 2    | Surgeon .. .. 1          |
| „ finisher .. 1             | Hosiery .. .. 3              | Police-serjeants .. 2      | Surveyors .. .. 7        |
| „ lapper .. 1               | House-decorator .. 1         | Porter .. .. 1             |                          |
| Coach-makers .. 2           | „ keeper .. .. 1             | Power-loom tenter .. 1     | Tailors .. .. 10         |
| „ painters .. 2             |                              | Printers .. .. 21          | „ and draper .. 1        |
| Coal-agent .. .. 1          | Index-taker .. .. 1          | „ readers .. .. 2          | Tailoress .. .. 1        |
| „ dealer .. .. 1            | Inland Revenue officers 2    | Pupil-teachers .. 44       | Teachers (other than     |
| Collectors .. .. 7          | Iron-founder .. .. 1         | Putters-out .. .. 2        | pupil-teachers) .. 69    |
| Colour-mixer .. 1           | „ moulders .. .. 3           |                            | Time-keepers .. .. 8     |
| Colourist .. .. 1           | „ turners .. .. 8            | Railway carriage builder 1 | Tin-plate workers .. 5   |
| Commercial travellers .. 5  | Ironmongers .. .. 6          | Reporters .. .. 3          | Tobacco-manufacturer 1   |
| Compositors .. .. 7         |                              | Roller-coverers .. 3       | Tobacconist .. .. 1      |
| Confectioner .. 1           | Jewel-case maker .. 1        | Rope-makers .. .. 2        | Tool-maker .. .. 1       |
| Contractor .. .. 1          | Jewellers .. .. 6            |                            | Townsmen .. .. 1         |
| Cooper .. .. 1              | „ engraver .. 1              | Saddlers .. .. 3           | Turners .. .. 23         |
| Cop-booker .. 1             | Joiners .. .. 78             | „ ironmonger .. 1          | Tutor .. .. 1            |
| Copper-smiths .. 2          |                              | Sailor .. .. 1             | Twisters .. .. 3         |
| Cork-cutter .. 1            | Labourers .. .. 8            | Salesmen .. .. 22          |                          |
| Corn-merchant .. 1          | Lamp-manufacturer .. 1       | Sanitary tube-maker .. 1   | Umbrella-maker .. 1      |
| Corrector of the press .. 1 | Leather-dresser .. 1         | Sawyer .. .. 1             | Upholsterers .. 2        |
| Cotton-mill, employed in 1  | „ seller .. .. 1             | Seal-engraver .. .. 1      |                          |
| Creeler .. .. 1             | Letter-carrier .. 1          | Schoolmasters .. 29        | Warehousemen and lads 84 |
| Curriers .. .. 2            | Linen-trade, in the .. 3     | „ mistresses .. 3          | Warpers .. .. 2          |
| Customs' officer .. 1       | Lithographers .. 3           | Science student .. 1       | Waste-dealers .. 2       |
| Cutler .. .. 1              |                              | Scripture-reader .. 1      | Watchmakers .. 5         |
|                             | Machine-joiners .. 2         | Self-actor minders .. 7    | Weavers .. .. 48         |
| Dental mechanist .. 1       | „ worker .. .. 1             | Serjeant-major .. 1        | Weighing-machine filer 1 |
| Dentists .. .. 2            | Machinists .. .. 5           | Sewed-muslin manufac- 1    | Wheel borer .. .. 1      |
| Designers .. .. 5           | Maker-up .. .. 1             | turer .. .. 1              | „ wrights .. .. 7        |
| Die-sinker .. .. 1          | Managers .. .. 3             | Ship-broker .. .. 1        | Whitesmith .. .. 1       |
| Dispenser .. .. 1           | Manufacturers .. 5           | „ carpenter .. 1           | Winders .. .. 5          |
| Divinity, student in .. 1   | Masons .. .. 5               | „ carver .. .. 1           | Wine and spirit mer-     |
| Dockyard apprentice .. 1    | Mast and block-maker 1       | „ wrights (and ap- 41      | chant .. .. 1            |
| Domestics .. .. 4           | Mat-makers .. .. 3           | prentices) .. .. 41        | Wire-drawer .. .. 1      |
| Drapers and assistants 16   | Measurer .. .. 1             | Shopmen .. .. 5            | Wood-carver .. .. 1      |
| Draughtsmen .. 28           | Mechanics .. .. 84           | Silversmith .. .. 1        | „ engravers .. 2         |
| Dressmakers .. 2            | Medical students .. 2        | Smiths .. .. 7             | Wool-sorters .. 12       |
| Druggists, &c. .. 3         | Merchants .. .. 2            | Soan-boiler .. .. 1        | „ staplers .. 2          |
| Dyers .. .. 5               | Metal-roller .. 1            | Soldier .. .. 1            | „ trade, apprentice to 1 |
|                             | Miller .. .. 1               | Solicitor .. .. 1          | Writers .. .. 7          |
| Edge-tool maker .. 1        | Mill-hands .. .. 3           | Spindle-makers .. 2        |                          |
| Engine-drivers .. 2         | „ man .. .. 1                | Spinners .. .. 10          | Undetermined, or not     |
| „ erectors .. 3             | „ wrights .. 17              | Staff-serjeant .. 1        | stated .. .. 65          |
| Engineers and appren- 126   | Milliner .. .. 1             | Staircase-maker .. 1       |                          |
| „ tices .. .. 126           | Minder .. .. 1               | Stationers .. .. 3         | Total .. 2,162           |
| „ mechanical .. 3           | Miners .. .. 2               |                            |                          |
| Engravers .. .. 5           | Moulder .. .. 1              |                            |                          |
|                             | Music-copyist .. 1           |                            |                          |
| Factory-hand .. 1           | „ seller .. .. 1             |                            |                          |
| Fancy box-maker .. 1        |                              |                            |                          |
| Farm-servant .. 1           | News-agents .. 2             |                            |                          |
| File-cutter .. 1            | Normal student .. 1          |                            |                          |
| Fitters .. .. 72            |                              |                            |                          |
| Flax-dressers .. 4          | Office-lads .. .. 6          |                            |                          |
| „ trade, in the .. 1        | Oilman .. .. 1               |                            |                          |
| Flour-dealers .. 2          | Optician .. .. 1             |                            |                          |
| Florist .. .. 1             | Organists .. .. 2            |                            |                          |
| Fruiterer .. .. 1           | Overlookers .. 8             |                            |                          |
| Fuller .. .. 1              | Overseer of roads .. 1       |                            |                          |
|                             |                              |                            |                          |
| Gardeners .. .. 24          | Packers .. .. 2              |                            |                          |
| Gas-fitters .. .. 2         | Painters—House, &c. .. 9     |                            |                          |
| „ meter inspectors .. 2     | Paper-maker .. 1             |                            |                          |
| „ maker .. 1                | Pattern-cutter .. 1          |                            |                          |
| „ works, employed in 1      | „ designer .. 1              |                            |                          |
| Glass-engraver .. 1         | „ makers .. 40               |                            |                          |
| „ painter .. 1              | Pawnbrokers .. 2             |                            |                          |
| „ stainer .. 1              | Photographers .. 3           |                            |                          |
| Glover .. .. 1              | Photographic instrument 1    |                            |                          |
| Governesses .. 9            | maker .. .. 1                |                            |                          |
| Grey-looker .. 1            | Pianoforte-maker .. 1        |                            |                          |
| Grinders .. .. 2            | Picture-frame maker .. 1     |                            |                          |

The report of the discussion at the Conference will appear in next week's *Journal*.

#### ANNUAL GENERAL MEETING.

The Annual General Meeting, for receiving the Report from the Council, and the Treasurers' Statement of Receipts, Payments, and Expenditure during the past year, and also for the Election of Officers, was held, in accordance with the bye-laws, on Wednesday, the 24th inst., at four p.m., SEYMOUR TEULON, Esq., Treasurer of the Society, in the chair.

The Secretary having read the notice convening the meeting, the minutes of the last Annual General Meeting, and of the subsequent Special General Meeting, were read and signed.

The Chairman then nominated Mr. Botly and Mr. Cook as scrutineers, and declared the ballot open.

The Secretary then read the following

## ANNUAL REPORT OF THE COUNCIL.

As directed by the bye-laws, the Council now lay before the members, at the Annual General Meeting, the report of their proceedings during their year of office.

## VISITS OF ARTISANS TO THE PARIS EXHIBITION.

In the Council's last Report it was stated that the Council were endeavouring to raise a fund for the purpose of assisting a number of selected workmen to visit and report upon the Paris Exhibition. The Council succeeded in raising, by subscription amongst members of the Society and others, the sum of £1,039 19s. 6d., being materially aided by the Government, who contributed £500. The Council were thus enabled to assist about eighty workmen, each of whom, without a single exception, delivered his report to the Society. These reports were printed in a volume, which was issued at the commencement of the year. That the edition has been sold off, and the work is now out of print, is a sufficient indication of the interest which the reports excited in the public. The Council have thought it right to continue this course of action, by assisting Robert Coningsby, one of the reporters of last year, to visit the United States of America, and report on the state of the principal manufactures there, and on the condition of the artisan, it being the opinion of the Council that the information thus obtained could not fail to be valuable, especially to the artisan class in this country.

## SOCIETY'S VISIT TO PARIS.

Following the precedent set on the occasion of the Paris Exhibition of 1855, a visit of members to the Exhibition of 1867 was organised. A place of rendezvous or reception-room was taken for their use in Paris, where their letters could be addressed, appointments made for meeting, and parties arranged for visiting special departments of the Exhibition, and the numerous manufacturing establishments, which were most freely thrown open by their proprietors for inspection, as well as the public works, which the authorities readily gave permission to be visited. The members had special opportunities of inspecting the water-works as well as the great sewers of Paris, engineering achievements which were viewed with much interest.

## CANTOR LECTURES.

The Cantor Lectures were this year delivered by Richard Westmacott, R.A., F.R.S., Professor of Sculpture in the Royal Academy, "On Art, especially including the History and Theory of Sculpture" (a course of three lectures); by Dr. Letheby, M.A., Professor of Chemistry in the London Hospital, and Medical Officer of Health and Food Analyst for the City of London, "On Food," (a course of four lectures); and by Dr.

F. Crace Calvert, F.R.S., "On Chloride of Sodium, or Common Salt, the Products Obtained from it, and their Applications to Arts and Manufactures," (a course of four lectures). Each course was largely attended by the members and their friends.

## ARTISTIC COPYRIGHT.

The Bill for Consolidating and Amending the Law of Copyright in Works of the Fine Arts has been carefully revised and has been brought into the House of Lords by Lord Westbury.

## TECHNICAL EDUCATION.

The jurors and others who visited the Paris Universal Exhibition last year were struck with the great advance which continental nations had made in Arts and Manufactures as compared with our own, as evidenced by the display made at that great gathering of industrial results, and this they attributed to that want of technical education on the part of our manufacturers and artisans which was so readily accessible to the people of the continental nations. They pointed out that, in their opinion, unless steps were taken in this country to afford our people equal facilities, we should soon be outstripped in the race of industrial progress by our foreign competitors. The subject naturally attracted the attention of the Council of this Society, founded for the Encouragement of Arts, Manufactures, and Commerce, and early in the year it was thought right to call together a Conference on this subject, to which were invited all who were known to take interest in it, whether as connected with manufactures or with the Universities and other leading educational bodies throughout the United Kingdom, as well as members of both houses of Parliament. The Conference was well attended, and extended over two days. A full report of its proceedings was published in the *Journal*. Mr. Wm. Hawes, Chairman of the Council, presided on each day; and the following resolutions were passed:—

Moved by Dr. Lyon Playfair, F.R.S., seconded by Earl Russell, and resolved—

1. That to establish and maintain a system of technical education adequate to the requirements of Arts, Manufactures, and Commerce in the United Kingdom, the three following educational reforms should be effected:—1st. In the universities, grammar schools, and other educational institutions for the upper and middle classes of society, instruction in science and art should be placed on the same favourable footing as other studies; 2nd. Efficient means of primary and secondary instruction should be brought within the reach of the working classes everywhere, and encouragement should be given to the study of the elements of science and art in the upper classes of all primary schools which receive aid from Government; and 3rd. Special institutions for technical instruction, including museums, adapted to the wants of the various classes of society, and to the industries of the country, should be established and maintained in the United Kingdom.

Moved by Mr. Harry Chester, seconded by

the Right Honourable Wm. Cowper, M.P., and resolved—

2. That in such measures as may be desirable for the general provision of the means of efficient primary and secondary education, it would be right to consolidate and improve, rather than overthrow, what has already been done, but that the voluntary principle requires to be supplemented by local rates for education.

Moved by the Rev. W. C. Lake, seconded by Mr. Antonio Brady, and resolved—

3. That while this Conference acknowledges the benefits which have ensued from the educational clauses of the Factory Acts, it is of opinion that the legislature ought as soon as practicable to provide that all children between certain ages, and not those only who are employed in remunerative labour of a certain character, should receive education during at least a minimum number of hours in each year, security being taken that the education be conducted in efficient schools.

Moved by Mr. Samuelson, M.P., seconded by the Rev. Henry Solly, and resolved—

4. That the Council of this Society be requested to appoint a standing Committee to take such steps as may give effect to the foregoing resolutions, to support all such well-advised schemes for technical education as may be brought before it, to send such deputations to the Government as may seem expedient, and to re-assemble this Conference when desirable.

The Council at once, in compliance with the terms of the last resolution, appointed a Committee, which at its first meeting delegated to a Sub-Committee, whose names have already appeared in the *Journal*, the duty of preparing a scheme of technical education calculated to promote the advancement of Arts, Manufactures, and Commerce in this country. This Sub-Committee has been actively engaged in the prosecution of its duties, and, acting on the power confided to it, has obtained the valuable services of the following gentlemen as colleagues:—Professor Hirst, F.R.S., Prof. Williamson, F.R.S., Dr. Frankland, F.R.S., Samuel Redgrave, Dr. David S. Price, Sir Daniel Cooper, Bart., T. D. Acland, M.P., General Sir W. Codrington, K.C.B., Captain Toynbee, Thomas Gray, Professor W. A. Miller, F.R.S., Dr. Voelcker, J. P. Seddon, of the Royal Institute of British Architects, and R. Phené Spiers, President of the Architectural Association. The Sub-Committee has held frequent meetings, and its report is in a forward state of preparation. It will then be submitted for adoption to the General Committee, and when finally completed will be published in the *Journal*.

The Council have already notified to the members, through the Society's *Journal*, the noble gift of Mr. Joseph Whitworth, of one hundred thousand pounds, for the endowment of "thirty scholarships, of the annual value of £100 each, to be applied for the further instruction of young men, natives of the United Kingdom, selected by open competition for their intelligence and proficiency in the theory and practice

of mechanics and its cognate sciences, with a view to the promotion of engineering and mechanical industry in this country." In order to prepare for carrying this into effect, Mr. Whitworth has at once created sixty exhibitions, of the value of £25 each, to be held for the ensuing year, the object being that they be given to enable youths, under certain conditions of age, to qualify themselves to compete for the scholarships in May next. The nomination to three of these exhibitions Mr. Whitworth has placed at the absolute disposal of the Council of the Society of Arts, to be given to artisans. The Council will, now that the examinations are over, at once proceed to make their selection of the three artisans who will be proposed to take advantage of Mr. Whitworth's munificent gift.

The Council take a deep interest in the success of this patriotic endeavour, on the part of a private individual, to establish the commencement of a system of technical instruction, and they trust that others in their localities will be stimulated to act in a similar spirit, and that their efforts will be aided by assistance from Imperial funds for an object which is, in reality, so widespread in its importance as to be properly designated Imperial.

#### EAST LONDON MUSEUM.

In connection with the subject of Industrial and Art Education, the Council note with great satisfaction the efforts now making by Mr. Antonio Brady and others to establish a Museum in the East-end of London, and they are happy to state that Parliament has voted £20,000 for the erection of the Museum on the site which has been purchased by a subscription set on foot by Mr. Brady. A conditional purchase of 4½ acres of land at Bethnal-green, being part of the Green itself, was made, and the site thus acquired was offered to the Government for the purpose of erecting the Museum thereon. This site has been accepted by Government as admirably adapted for the purpose, being within an easy walk of upwards of a million of people, mostly of the artisan class. The Museum is intended to be educational in the widest sense of the word, and it is hoped that it may be found useful in enabling our workmen to compete on more equal terms than at present with the skilled workmen of foreign countries, especially in matters of taste. The Council have had great pleasure in voting the sum of 100 guineas to aid in the purchase of the site referred to.

#### ALBERT MEDAL.

The Albert Gold Medal, founded to reward distinguished merit in Promoting Arts, Manufactures, and Commerce, has this year been awarded to Mr. Joseph Whitworth, F.R.S., LL.D., "for the invention and manufacture of instruments of measurement and uniform standards, by



which the production of machinery has been brought to a degree of perfection hitherto unapproached, to the great advancement of Arts, Manufactures, and Commerce."

This medal was instituted to reward "distinguished merit in Promoting Arts, Manufactures, or Commerce," and has been awarded in previous years, as follows:—

In 1864, to Sir Rowland Hill, K.C.B., "for his great services to Arts, Manufactures, and Commerce, in the creation of the penny postage, and for his other reforms in the postal system of this country, the benefits of which have, however, not been confined to this country, but have extended over the civilised world."

In 1865, to His Imperial Majesty the Emperor of the French, "for distinguished merit in promoting, in many ways, by his personal exertions, the international progress of Arts, Manufactures, and Commerce, the proofs of which are afforded by his judicious patronage of Art, his enlightened commercial policy, and especially by the abolition of passports in favour of British subjects."

In 1866, to Professor Faraday, D.C.L., F.R.S., for "discoveries in electricity, magnetism, and chemistry, which, in their relation to the industries of the world, have so largely promoted Arts, Manufactures, and Commerce."

In 1867, to Mr. W. Fothergill Cooke and Professor Charles Wheatstone, F.R.S., in recognition of their joint labours in establishing the first Electric Telegraph.

#### HARVESTING OF CORN IN WET WEATHER.

The injury which accrued to the harvest of last year, from the prevalence of wet weather, drew the attention of the Council to the consideration how far it would be possible, by any arrangements or mechanical contrivances, to overcome such damage, and they resolved to offer the Gold Medal of the Society, and a Prize of Fifty Guineas, for the best Essay on the Harvesting of Corn in Wet Seasons.

They suggested in their offer that the first part of such essay—after noticing the various systems at present adopted in damp climates for counteracting the effects of moisture upon cut corn in the field, and for avoiding such exposure in wet seasons by peculiar harvesting processes—should furnish a practical and analytical exposition of the best available means:—

- 1st. Whereby cut corn may be protected from rain in the field.
- 2nd. Whereby standing corn may, in wet seasons, be cut and carried, for drying by artificial process.
- 3rd. Whereby corn so harvested may be dried by means of ventilation, hot air, or other methods; with suggestions for the storage both in the ear and after threshing.
- 4th. Whereby corn, sprouted, or otherwise

injured by wet, may be best treated for grinding or feeding purposes.

They also suggested that the whole be supplemented by a statement of practical results, and the actual cost of each system described, and authenticated estimates of any process proposed for adoption, based on existing but incomplete experiments. They did not, however, bind the writer to the order or limit the treatment of the subject, provided it were kept within the scope of practical experience and utility. The essays were to be sent in to the Society on or before the 1st of January last.

Twenty essays were sent in, and were placed in the hands of Messrs. C. Wren Hoskyns, C. S. Read, M.P., and J. C. Morton, who, at the request of the Council, kindly undertook the duty of judging their merit. These gentlemen have unanimously recommended the Council to award the Gold Medal and the Fifty Guineas to Mr. W. A. Gibbs, in respect of the Essay sent in by him; and the Council have had much pleasure in making the award to that gentleman. The Essay is now in the printer's hands, and will shortly appear. In the opinion of the judges the plan proposed by Mr. Gibbs, and practically demonstrated by him on a large scale, is likely to prove a valuable remedy for the evil, placing the farmer in a more favourable position, and rendering available for the public a larger supply of food.

#### FOOD COMMITTEE.

This Committee has been very regular in its attendance, and much very interesting matter has come before it. In the *Journal* has been published from time to time the information the Committee has collected. The following is the report which the Council have received:—

In presenting their second report to the Council, the committee appointed to inquire respecting the food of the people, beg to state that during this session they have been engaged in the pursuit of inquiries of a like nature to those which occupied them in the preceding one. As the general character of these inquiries and their bearing on the subjects referred to the committee, were sufficiently pointed out in their first report, it will be needless to take up the time of the Council with any lengthened preface, and the committee will therefore at once proceed to present a *resumé* of their work under appropriate heads.

#### I.—AS RESPECTS THE POSSIBILITY OF INCREASING THE SUPPLY OF FOOD.

Under this head the committee have to state that they have now had an opportunity of examining a further supply of the dried and powdered meat (both beef and mutton) from Queensland, of which they mentioned having seen a very small sample last year. It is prepared in Brisbane, and the agents for its sale in Great Britain are Messrs. Orr and Honeyman, of Princes-square, Glasgow. A member of this firm attended before the committee, and gave full information respecting the preparation. It is unsalted meat, and is sweet and good to the taste. An analysis made by Dr. Swaine Taylor (to whom the best thanks of the committee are due for gratuitously rendering them on this and other occasions valuable scientific assistance) determined it to be a

nutritious article consisting of fibrous animal matter, and containing nothing objectionable. It therefore deserves a favourable report; but from its powdered condition, and a not very prepossessing appearance, the committee do not feel able to predict that it is likely to be used on a large scale as a food for the people. It must also be observed, that, unless carefully kept, such pulverised animal substances are liable to become infested with acari.

In reference to the question of preserving whole joints or carcases, the system of Messrs. Bailey and Medlock has claimed much attention. It consists in treating the meat to be preserved, either by steeping or injection, with bisulphite of lime. The Committee have made many experiments, both by way of injection and of external application, in order to test the value of this system, and are of opinion that the process will be found of use for preserving meat for a brief number of days for domestic use, or in the hands of salesmen, but they are not prepared to state that the facts before them at present prove that carcases can be usefully kept by Bailey and Medlock's plan for long periods, or during importation from abroad.

For the latter purpose it has been proposed, by influential persons at Sydney, to resort to a different instrumentality—that of cold. They assert that when the meat is placed in a closed vessel, the temperature of which is reduced from without, none of the bad effects follow which are said to arise when provisions are frozen by actual contact with ice. At present the promoters of this plan are understood not to have decided in what form they can most economically provide the refrigeration, which must, of course, be kept up during the voyage by some artificial means, and no meat thus preserved has as yet arrived in this country preserved by this process. The Committee look with interest at the scheme, and hope to hear of some practical trial of it, which may determine its value. In connection with this plan they desire to record their satisfaction at the energetic manner in which the subject generally has been taken up in Australia.

Mr. Robert Atkins laid before the Committee a scheme for bringing live cattle from South America, in large steamers especially constructed for the purpose, but at present they are not prepared to express any opinion upon it, and they await further information.

*Fish.*—On this important and promising topic a great amount of evidence has been taken, both as respects sea and river fishing. Instead of going into this in detail, it appears most desirable to urge upon the Council the expediency of constituting some permanent body to deal exclusively and effectually with the subject. If a Piscicultural Committee could be organised in connection with the Society, those most interested in the question, and most competent to undertake it, would be attracted to take part in the work, and much benefit to the whole country might be the result. It is possible also, in the event of the Council moving with energy in this direction, that the Fishmongers' Company might be induced to co-operate with them in some useful manner. Many interesting points might thus be dealt with, upon which the present Committee have not time or means to enter with effect.

*Poultry.*—It seems probable that cottagers, farmers, and others might do much more in the way of raising poultry than they now do. It is therefore suggested that the Council should take measures to induce the associations which hold the poultry shows at the Crystal Palace, at Birmingham, and elsewhere, and also the agricultural societies, the farmers' clubs, and the societies for improving the condition of the labouring classes, to offer prizes for poultry—not in reference (as now) solely to the purity of breed, but with relation also to its value for food, that is to say, prizes for poultry killed, plucked, and ready for table. It is probably also that the Society of Arts might, through its affiliated institutions throughout the kingdom, do somewhat to diffuse a better knowledge of the conditions that would enable the

country gentleman, the farmer, the owner of a small villa, and the cottager, to keep poultry for sale at a profit.

*Fungi.*—The Committee have taken some interesting evidence as to the edible character of large classes of fungi, of which no use is now made in this country, but they feel that the first step must be to disseminate more accurate information in schools, and by other like methods, before the subject could be safely or profitably suggested to the public in connection with human diet; and the Committee have satisfaction in stating that the evidence given before them by the Rev. M. J. Berkeley on this subject has been brought to the notice of the Royal Horticultural Society, and that that society has already begun to take measures to diffuse useful information respecting it.

*Bread.*—In their former report the Committee alluded to a French process for grinding corn, by which a larger percentage is said to be utilised and less rejected with the bran than on the common system. They are happy to say that a complete and valuable report has since been made to them on this subject by Mr. Le Neve Foster, who took occasion, when at the Paris Exhibition, to make a careful inspection of the system at the Boulangerie Scipion. The report is published in extenso in the *Journal* (vol. xvi., No. 789), and does not bear abridgment. The plan now adopted appears to differ somewhat from the idea which the Committee had been led to form of it, the method employed being an ingenious system of dressing, in which a current of air is made to play an important part, and not one of decortication; but the great point of interest remains as before, viz., that a large saving in the grain is said to be effected without the product acquiring the distinctive character of brown bread. It is much to be desired that the attention of millers and others should be directed to the subject, with a view of considering whether it would be practicable to introduce the system more generally.

## II.—BETTER DISTRIBUTION OF FOOD.

*Markets.*—Much varied and valuable evidence has been taken by your Committee on the subject of markets, both for the sale of fish and of meat. The general bearing of this evidence has been in favour of one great central dépôt for produce of all kinds as the medium of communication between the producer or importer and the retailer, with dépôts for the consumer in various parts of the metropolis, radiating from this common centre, and supplied from it, but this subject is one of such vast importance to the community, that your Committee propose further investigation before adopting as sound the principle which has been urged upon them with great force and ability.

*Milk.*—To increase the supply of good milk has been felt by your committee to be worthy of special attention. And while they are unable to state that, in their opinion, this has been hitherto accomplished, they desire to draw attention to the fact that, in one instance at least, possibly in more, shops for the sale of pure milk have been opened in a poor district by the owner of a country farm, who sells through his own agents. They believe that something may be done by the Society to help and ensure progress, and they would propose that prizes be offered for the best form of milk-can for conveying it from the country, and also for an improved railway van in which the cans might be stowed, so as to ensure, as far as possible, the milk arriving in town in good condition. While on the subject of milk, your Committee would direct the attention of the Council to the mode adopted at Zurich, in Switzerland, for its preservation. Fresh milk is evaporated to the consistence of a thick syrup, and with the addition of some sugar, to help as a preservative, an article of diet is produced which is of great value; the globules of milk remain unbroken, and when the preserved and condensed milk is diluted with a proper proportion of water, a fluid is produced which, except that it is a little sweeter than ordinary milk, cannot be distinguished from it. Where fresh milk is

not to be procured, or can only be procured with difficulty, this preparation forms a valuable article of diet.

The Committee would suggest, as likely to prove most beneficial, that prizes should also be offered for improved railway vans for conveying meat, as the information obtained by your Committee leads strongly to the inference that much good would result to the community from alteration and amendment in the modes of transit at present adopted.

### III.—COOKING.

Of the various methods for cooking and implements in its aid, which have been brought before the Committee, two are specially worthy of notice. 1st, that invented by Captain Warren, and extensively used by the army authorities; 2nd, the Norwegian box for cooking meat, vegetables, &c., without the continued intervention of fire. The former consists of a stove, so ingeniously constructed that nearly all the heat given out by the combustion of the fuel employed is utilised, and by the use of about 20 lbs. of coal the rations of 100 men for a whole day are either roasted, baked, or boiled, with the special addition of a mode of cooking peculiar to Captain Warren, and called after his name, "Warrenising." This consists in using jacketed vessels, so constructed that whatever is contained in them is thoroughly cooked by steam without the articles of food being in any way exposed directly to its influence. This may either be accomplished by the waste steam given off in the other processes on the stove, or on a common fire, by the use of vessels specially constructed, which may be obtained at little more than the cost of the most ordinary utensils. Food thus cooked retains fully its flavour, and much of the loss consequent upon other modes of cooking is prevented. The Norwegian apparatus, which promises to be of much value in certain cases, consists of a tin vessel, of any given shape, into which the food to be dressed is placed; the vessel is then filled with boiling water, and allowed to remain on a fire and boiled for a few minutes, and afterwards shut up for two or three hours in a box thoroughly padded with felt, which so retains the heat that at the expiration of the period the meat and the vegetables are found to be thoroughly cooked, and the water of immersion to retain about 170 degrees of temperature.

### IV.—INSTRUCTION OF THE LABOURING CLASSES IN COOKING.

An institution, the working of which has been carefully inspected and reported upon by two members of the Committee, claims notice under this head. It is called the Industrial Kitchen, and is situated at 14, Oxford-mews, Paddington. In a room of the simplest description, and with the aid of one of Benham's stoves, plain joints, puddings, broths, &c., are cooked, under the management of a good plain cook, assisted by girls from the national school. The institution is mainly supported by voluntary contributions, and the subscribers have the privilege of giving tickets to the sick and infirm poor of the neighbourhood (but not to street beggars), which entitle them to receive portions of the cooked provisions upon a very trifling payment. Twelve of the elder girls in the parochial school are selected to assist, and these take weekly turns, two serving at a time, so that each girl serves one week out of six. It is this feature of the plan which entitles it to mention here, as presenting the means of giving school-girls a practical knowledge of plain cooking, and forming them to industrial habits, without materially interfering with their education. The Committee cannot but think that if some such plan were more generally adopted in connection with schools for the poorer classes, a great step would be taken towards removing the ignorance now so prevalent as to the best and most nutritious food, and as to the proper and most economical way of preparing it. They believe that the attention of all educational authorities might profitably be directed towards the encouragement and extension of similar institutions.

They are aware that there are many other institutions which give valuable instruction of the same kind to the children of the poor; but attention is drawn to this one on account of the simplicity of its arrangements and its very practical character. The Committee have not been able as yet to devote much attention to that very important branch of their inquiries, the adulterations of food, and frauds in the use of weights and measures of food. They have only further to add, that they are of opinion that they can usefully continue their inquiries in connexion with the important matters entrusted to them, and they therefore beg to recommend to the Council, that the Committee be reappointed, and permitted to resume its labours during the next session of the Society.

(Signed) BENJ. SHAW, *Vice-Chairman*.

### MUSICAL EDUCATION COMMITTEE.

In consequence of the unsettled state of the Royal Academy of Music, and until evidence be afforded that the Academy is able or not of itself to improve its organization, it has not been judged expedient to bring the reports of the Committee to the notice of Her Majesty's Government. The Council have felt, also, that the present position of Parliament was not favourable to a consideration of the subject. But they have the satisfaction of seeing that Mr. Disraeli has recognised the fact, that a large grant would be requisite for an efficient institution, and that "Her Majesty's Government were of opinion that provision for a cheap musical education should form part of our national system." The Council are happy to find that these opinions entirely accord with those expressed in the reports of the Committee.

### MEMORIAL TABLETS.

The following tablets have been fixed on houses formerly occupied by—

Lord Byron, 16, Holles-street, Cavendish-square, now occupied by Messrs. Boosey and Co.  
His Imperial Majesty Napoleon III., 3A, King-street, St. James's; now occupied by Madame Berti.

Leave has been obtained to affix similar tablets on the former residences of Benjamin Franklin, Sir Joshua Reynolds, Lord Nelson, and James Barry, but the progress in fixing these and others has been delayed by experiments in the manufacturing, which Messrs. Minton, Hollins, and Co., have been making.

Biographical notices of remarkable persons have been inserted in the *Journal* as far as the letter S. The publication of the remainder will shortly be resumed.

### ART WORKMANSHIP PRIZES.

The competition this year was well sustained, the numbers of those competing being about the same as last year. The prizes awarded by the judges, Messrs. Richard Redgrave, R.A., and M. Digby Wyatt, amounted to £198 10s., an increase on the amount of the previous year, which was £182 8s. 8d. The report of the judges was read to a meeting of the Society, held on Wednesday evening, the 12th of February, when the competitors were invited to attend. This report has already been published in the *Journal*. The

programme for the current year has been issued, and, following the suggestions of the judges, has been very materially changed. The recommendations of the judges were as follows :—

Firstly, we think the time has arrived when animation might be given to future competitions by a considerable change of programme. Especial prominence might be given to evidence of ability in processes not commonly practised in this country—such as several of those involved in the manufacture of Venetian glass; in the execution of enamelling, both upon earthenware and metal bases; in the application of painting and lacquering, as in Japanese and Cashmerian work; in Damasceining, both after the Milanese and Oriental systems, &c. From such efforts new branches of national industry might possibly arise; and, at any rate, working men would be induced to exercise their ingenuity and to acquire that pliability or general aptitude in which, as compared with the French art-workman, the English artificer is somewhat deficient.

Secondly, the apportionment of the money prizes requires revision, so as to bring the rewards offered into better proportion to the labour or outlay risked in the different sections by the workmen entering upon the competition; regard being, of course, had to the special branches of art industry in which temporary stimulants might seem most needed.

Thirdly, prizes might be offered for evidences of proficiency in two or three branches of industry not yet included in the Society's programme, as stained glass, jewellery, brass-rule cutting, the application of turning

to artistic wood or metal work, &c. Some such changes, and the withdrawal of all hackneyed models, would probably tend to relieve the apparent monotony of the Society's competitions; and, after a year or two's interval, the leading features of the present programme might be reverted to with a fresh and lively interest on the part both of the art-workmen and of the public.

The Society is much indebted to Messrs. Redgrave and Wyatt for their valuable services in acting as judges, as well as for the assistance they have given in drawing up the programme for the present year.

### UNION OF INSTITUTIONS.

The details of the proceedings of the Society under this head are given in the Secretary's report, read to the Conference on Friday, the 19th instant. It is gratifying to find that the Society's efforts in this direction, to stimulate young men to continue their education after leaving school, are bearing good fruit year by year; the numbers presenting themselves for examination are increasing, and this year there has been a large accession of candidates.

## FINANCE.

The financial statement of the Society's affairs is appended hereto.

TREASURERS' STATEMENT OF RECEIPTS, PAYMENTS, AND EXPENDITURE,  
FOR THE YEAR ENDING 30TH MAY, 1868.

[illegible]

### LIABILITIES AND ASSETS.

[illegible]

\* The above is exclusive of the value of the Society's lease of premises.

STOCK STANDING IN THE NAME OF THE SOCIETY AT THE BANK OF ENGLAND.

|                                    |            |   |   |
|------------------------------------|------------|---|---|
| Consols .....                      | £4,914     | 6 | 8 |
| New 3 per Cents. ....              | 388        | 1 | 4 |
| Reduced 3 per Cents. ....          | 434        | 8 | 6 |
| India 5 per Cent. Rupee Notes..... | Rs. 52,000 |   |   |

TRUST FUNDS INCLUDED IN THE ABOVE.

|                                    |        |   |   |   |
|------------------------------------|--------|---|---|---|
| Swiney Bequest.....                | £4,500 | 0 | 0 | Consols, chargeable with a sum of £200 once in five years.    |
| John Stock's Trust.....            | 100    | 0 | 0 | „ chargeable with the Award of a Medal.                       |
| North London Exhibition Trust..... | 167    | 7 | 3 | „ chargeable with the Award of the Interest as a Money Prize. |
| Fothergill's Trust.....            | 388    | 1 | 4 | New 3 per Cents., chargeable with the award of a Medal.       |
| Cantor Bequest.....                | 5,049  | 9 | 7 | Invested in India 5 per Cent. Rupee Notes, 52,000 rupees.     |

JOHN MURRAY, } *Auditors.*  
SAMUEL ANDREWS, }  
P. LE NEVE FOSTER, *Secretary.*

*Society's House, Adelphi, 15th June, 1868.*

The CHAIRMAN said he trusted the long report which had been read would be satisfactory to all the members present. It embraced a very large amount of work which had been done during the past year, and to some extent shadowed forth the Society's proceedings for the ensuing one. It was almost impossible, even for those who paid the greatest attention to the business of the Society, to imagine how extensive was the range of its operations.

Professor TENNANT suggested that, during the vacation they might usefully reprint in the *Journal* the description of the paintings with which their walls were adorned.

The CHAIRMAN approved of the suggestion, and said if there were an opportunity it would be carried out.

The CHAIRMAN then put to the meeting that the Report be received and adopted, which was carried unanimously.

The CHAIRMAN said he would take the opportunity of expressing, on his retirement from the treasurership, an office which necessarily brought him into almost daily contact with the officers of the Society, his high sense of the value of their services. He could testify to the large amount of work got through by them, and in reference to the department of Finance, with which he was more especially conversant, he had much pleasure in stating that at the end of three years' service as treasurer, he had not discovered one single error in the books.

Mr. BOTLY, as a very constant attendant at the Society's meetings, begged leave to propose a cordial vote of thanks to the officers for the admirable manner in which they had discharged their duties during the past year. He visited Paris with the Society, and certainly the officers on that occasion had done their utmost to render the visit a pleasurable one to all parties. The courtesy which was invariably displayed by them towards the members on all occasions was worthy of the highest praise, and he felt sure the meeting would be unanimous in passing the vote of thanks which he begged to propose.

Mr. WHITE felt the greatest pleasure in seconding the motion, and for his own part he thought such a compliment should not end in mere words. The expenses of

living had so largely increased of late years that he had found in other societies with which he was connected that the salaries of officers whose services had been found valuable had been raised. As a private member, he had no wish to interfere in this matter; but he trusted the Council, seeing they had good and efficient officers, would bear this matter in mind, and give them that material encouragement which, in his opinion, they ought to receive.

The CHAIRMAN said he had great pleasure in putting the motion. The past year had been a very heavy one indeed, but the business had been thoroughly well done, and the officers were always ready and anxious to do their best to further the objects of the Society.

The motion having been carried unanimously,

Mr. LE NEVE FOSTER, secretary, on the part of his colleagues and himself, said how very much gratified they were at such a strong expression of opinion from the members. They were always desirous of doing all that lay in their power to promote the interests of the Society, and with regard to the observations which Mr. White had so kindly made in reference to their salaries, he would only say that they had every confidence in the Council, who, he felt sure, would do that which was right and just, both as regarded the members on the one hand, who contributed the funds, and the officers, whose services the meeting had been pleased to recognize in such a cordial manner, on the other. On the part of his colleagues and himself, he most heartily thanked the meeting for their kind expression of opinion.

Mr. ANTONIO BRADY said he should be much pleased, with the permission of the Chairman, to give some information with reference to the East London Museum. The Society of Arts had materially assisted this great work, and had considerably diminished the difficulty of raising the necessary funds. The hundred guineas which the Society had so liberally given induced many others to do the same. It would be satisfactory to the meeting to know that he believed he had got nearly all the money which was necessary for the purchase of the site. He anticipated that very shortly they would have a public ceremony for the laying of the foundation-stone, when he hoped any members of the Society who took an

interest in the welfare of the working classes at the East-end would honour them with their presence. It was intended that the museum should be educational in a very varied sense, and that both art and technical education should be there given in the best possible manner. When the French minister went down to the Chamber of Deputies a little while ago and stated that the French had been in the habit of supplying our manufacturers with art designs, it was rather a pregnant fact when he added that he wanted more money to enable them to keep pace with the giant-strides which England was making in art, by reason of the advantages which they had at South Kensington. The promoters of the East London museum felt that if South Kensington had done such great things, when it was practically inaccessible to the working men at the East-end, they might expect very much greater results if they could bring art education to their very doors. The new museum would be within a two-miles' walk of a million of people, and he did not think a better site could have been obtained. It had been made a condition with the trustees that it should be open every week-day evening until ten o'clock. He was in hopes that they would participate in a division of those wonderful Turner drawings which were now stowed away in Trafalgar-square.

Mr. WHITE said he had known the locality for some forty years, and the situation of the museum was most excellent, being within reach of all the mechanics of the East-end, particularly of the descendants of the French refugees. He had taken great interest in the neighbourhood, and hoped the undertaking would be thoroughly successful.

The CHAIRMAN was much pleased to hear from Mr. Brady that such good progress had been made, and that the works would really be commenced within a short period. Being himself a descendant from a French refugee, he might be permitted to say that they owed a large debt to those men, and he did not know how they could better repay them than by erecting a museum in their midst. Spitalfields and Bethnal-green owed their origin to the refugees from France, who brought to this country those trades to which we were largely indebted for our national prosperity, and there was no better way of repaying to their descendants—who were now becoming scarce there, owing to the removal of the silk manufacture to Manchester and Macclesfield—than by establishing this museum. Those who had read the "Artisans' Reports," published by the Society, must have noticed that most of the writers attributed a great deal of the superiority of the French workman to his being able to see fine examples of art in the museums and public buildings of Paris. There was no doubt that improvement in our public buildings had been going on rapidly of late years; and if we could establish museums within reach of working men it must have a beneficial effect.

Sir WALTER STIRLING, Bart., was much pleased to hear of the countenance and support which the Society had given to the East London Museum, and took occasion to refer to a subject which had been much spoken of lately, the removal or demolition of Temple-bar, which he much deprecated. The structure might not be quite perfect, but was a very good specimen of the architecture of the period, and London abounded with buildings not so well worthy of preservation. It would be a great pity, in his opinion, to remove it, even considered merely as an embellishment, and apart from its historical associations.

The ballot having remained open one hour, and the scrutineers having reported, the Chairman declared that the following members had been elected to fill the several offices. The names in *Italics* are those of members who have not, during the past year, filled the offices to which they have been elected:—

## COUNCIL.

## PRESIDENT.

H.R.H. the Prince of Wales, K.G.

## VICE-PRESIDENTS.

|                                    |   |
|------------------------------------|---|
| Sir W. H. Bodkin (Assistant Judge) | C. Wren Hoskyns.                              |
| Sir J. P. Boileau, Bart.           | Lord Henry G. Lennox, M.P.                    |
| Right Hon. H. A. Bruce, M.P.       | <i>Sir John Lubbock, Bart.</i>                |
| <i>Duke of Buccleugh.</i>          | Lord Lyttelton.                               |
| Harry Chester.                     | <i>Sir R. Montgomery, K.C.B.</i>              |
| Henry Cole, C.B.                   | Right Hon. Sir John S. Pakington, Bart., M.P. |
| Lord de l'Isle and Dudley.         | Thomas Twining.                               |
| J. P. Gassiot, F.R.S.              | <i>Joseph Whitworth.</i>                      |
| The Earl Granville, K.G., F.R.S.   | Lord Justice Sir William Page Wood, F.R.S.    |
| William Hawes.                     | The Archbishop of York.                       |

## ORDINARY MEMBERS OF COUNCIL.

|                          |  |
|--------------------------|--|
| <i>F. A. Abel.</i>       | <i>Major-Gen. Sir Vincent Eyre, C.B.</i> |
| John Bell.               | <i>Peter McLagan, M.P.</i>               |
| Antonio Brady.           | Samuel Redgrave.                         |
| Edwin Chadwick, C.B.     | Benjamin Shaw.                           |
| <i>Hyde Clarke.</i>      | <i>Seymour Teulon.</i>                   |
| Sir Daniel Cooper, Bart. | <i>James Ware.</i>                       |

## TREASURERS.

|                     |                |
|---------------------|----------------|
| <i>John Murray.</i> | Philip Wright. |
|---------------------|----------------|

## AUDITORS.

|                 |                       |
|-----------------|-----------------------|
| Samuel Andrews. | <i>Henry Vaughan.</i> |
|-----------------|-----------------------|

## SECRETARY.

Peter Le Neve Foster, M.A.

## FINANCIAL OFFICER.

Samuel Thomas Davenport.

The CHAIRMAN proposed a vote of thanks to the scrutineers, Mr. Botly and Mr. Cook, for their services, which was carried.

Mr. BOTLY, after acknowledging the compliment, said he had been much pleased with what he had heard as to the favourable prospects of the East London Museum, and suggested that arrangements should be made for supplying refreshments to the working classes there at the lowest possible charge.

Mr. BRADY said he had not thought it necessary to go into these matters of detail, but the refreshment department had been specially provided for in the conditions. They were convinced that many men frequented public-houses for the sake of the comforts and society which they found there; and if the same, or better accommodation could be afforded elsewhere, they would avail themselves of it, and take their wives and families. He also hoped they would be able to establish, at the museum, music classes, which he considered had a very humanising influence; in short, it was intended to make the museum an educational institution of the highest order.

Mr. WHITE, from his knowledge of the neighbourhood, where he had worked for some time in the same direction as Mr. Brady, though on a smaller scale, was certain there would be no lack of response on the part of the working classes to any efforts made for their advantage. He hoped there would be lectures and explanations given, the living voice being added to the inanimate object, in order to make it thoroughly intelligible.

At the conclusion of the General Meeting a Special Meeting was held, when the following candidates were balloted for and duly elected members of the Society:—

Ball, Ferdinand Mercer, Mayfield-cottage, Mortimore-road, Kilburn, N.W.  
 Browne, J. H., 1A, Holland-park, Notting-hill, W.  
 Catterall, Joseph, Preston, Lancashire.  
 Charlton, J. S., Thrale-house, Streatham, Surrey.  
 Cronin, Daniel, 30, Bloomsbury-square, W.C.

Croxton, George, 64, Warwick-square, S.W.  
 Davis, W. S., Whitworth School, Cheltenham.  
 Eastwick, Edward Backhouse, C.B., 38, Thurlow-sq., S.W.  
 Ellis, Richard, Camberwell-grove, S.E.  
 Evans, Henry Sugden, 154, Holland-rd., Kensington, W  
 Galt, William, Port Stewart, County Londonderry.  
 Gee, George Edward, High-street, Chesterfield.  
 Hawksley, Thomas, C.E., 30, Great George-street, S.W.  
 Leigh, James, Stockport.  
 Pochin, Mr. Alderman, Manchester.  
 Trotter, Clarence E., 8, Shrewsbury-road, Bayswater, W.  
 Whitehead, Lieut.-Col. Frederick George, 25, Clifton-gardens, W.

Mr. HYDE CLARKE proposed a vote of thanks to the Chairman, for his services on that occasion, and also as treasurer for the last three years. He desired to include the Council in this vote, and especially the Chairman of the Council, Mr. Hawes, who had so actively and efficiently performed the duties of the office, and the value of whose services the Society was at all times most ready to recognise.

The vote, having been seconded by Mr. P. L. SIMMONDS, was carried by acclamation.

The CHAIRMAN briefly thanked the meeting on behalf of the Council and himself, and the proceedings terminated.

#### ROYAL ACADEMY OF MUSIC.

The following is extracted from the *Times'* report of the debate in the House of Commons on Thursday, the 18th instant:—

Mr. OTWAY asked the First Lord of the Treasury whether it was true that the Government had announced their intention of withdrawing the small grant of £500 which had for some years been granted to the Royal Academy of Music; and whether the Government contemplated the creation of any institution for musical education, to be supported from the public funds.

Mr. DISRAELI said the grant had been already withdrawn, no provision having been made for it in this year's estimates, and on notice being taken of that omission an explanation was given. The discontinuance of the £500 had not been fatal to the institution, for the aid which it required was much larger, and the Government, after investigating the matter, were of opinion that they would not be authorised in recommending any enlargement of the grant, the results of the institution not being, in fact, of a satisfactory character. They were of opinion that provisions for a cheap musical education should form part of our national system; but, although the subject had engaged not a little of their attention, he was not prepared to say anything further upon it at present.

#### Fine Arts.

RESTORATION OF WORKS BY JEAN GOUJON.—The façade of the Hôtel Carnavalet, formerly the residence of Madame de Sévigné, but now destined to contain the Museum of the City of Paris, has been completely restored, and the scaffoldings removed. The sculptures by Jean Goujon have been treated with the greatest care, and present excellent examples of his singularly pure and graceful style; they consist of a group of two children, in a medallion, supporting the arms of the original proprietors of the mansion; three trophies of arms, a winged figure with the feet on a mask and a cornucopia in one hand, and two lions. The repairs of the interior are also proceeding rapidly. For the benefit of visitors to Paris, it may be stated that the Hotel de Carnavalet is in a street formerly called the Rue Culte Sainte Catherine, but recently named after the famous inhabitant of the mansion, the Rue de Sévigné, near the Place Royale, and not far from the Place de la Bastille.

LOCAL EXHIBITIONS OF ART IN FRANCE.—This is the grand season for these provincial exhibitions. On the 5th of July the new museum of the town of Amiens will be first used for an exhibition of works of art, under the management of the local Society of the Friends of Art. The Emperor has just sent the committee one gold and two silver medals, as his contribution to the prize-list. The Arras exhibition is announced to open on the 23rd of August. This late date is selected in order that works exhibited at Amiens may appear also at Arras; such arrangements are of great importance to artists; and it may be mentioned that at the present moment, besides the Amiens and Arras exhibitions, those who are now withdrawing their works from the great Paris Exhibition have the option of the Havre exhibition also. The arrangements and advantages of the Arras exhibition are much the same as those at Amiens.

EXHIBITION OF FINE ARTS AT BESANÇON.—The Exhibition of the Society of the Friends of Art, now open at Besançon, contains 406 works, being full 100 beyond the ordinary number exhibited there, and in a few days the sales have amounted to 17,000frs., of which about one-half are to the authorities of the town and the Society, and the rest to private individuals; the works purchased by the Society are to be distributed by lottery. The names of several well-known Parisian artists are in the list of those whose works have been sold.

EXTRAORDINARY ROBBERY OF WORKS OF ART.—Fourteen armed robbers entered the celebrated château of the Vista Ægre, near Madrid, the property of the Marquis de Salamanca, a few days since, surprised and imprisoned the servants, and carried off works of art valued at more than £4,000 sterling. Amongst the articles taken are, a massive silver statue of the Virgin, with a crown of gold, two silver crucifixes, candelabra, salvers, and a mass of precious stones.

#### Manufactures.

REGULATION OF JUVENILE LABOUR IN FRANCE.—A new code of regulations with respect to the labour of young persons in factories is to be shortly laid before the Corps Legislatif. The following are said to be the principal provisions:—The age to which six hours of labour is the maximum, is to be increased from twelve to thirteen years; from ten to fourteen, children may be employed in coal and other mines, but not more than four days in the week. All young persons, to the age of sixteen, to have time to go to school during two hours of the day. Young persons between the ages of thirteen and sixteen years may be employed, as at present, during ten hours per day, but they are not to be allowed to manage steam engines or other machinery. No young person above thirteen years of age is to be employed in a factory or mine without proof that he or she has received three years' primary instruction. With respect to girls, the regulations will be more particular than those of the law of 1841 now in force. In the first place they are to be utterly excluded from working in subterranean galleries of mines, and no girl under eighteen years of age is to be employed more than ten hours a day. The primary education and religious instruction of minors, will be the object of regulations to be made by the local commissions of surveillance, and the regional inspectors now existing will have for assistants, the inspectors of the asylums, the guards of mines, the inspectors of infant asylums, and the delegates of the societies for mutual assistance, and of the bureaux of public charity.

GOLD AND SILVER PLATE IN FRANCE.—The goldsmiths' trade is almost entirely concentrated in Paris, but there are some makers of church plate at Lyons. Fine silver is worth on an average 220frs. the kilogramme; the law allows the employment of two different standards of alloy for solid plate; but the first of these is almost exclusively employed. This is worth 212frs. 62c.,



while the second is only worth 180frs. the kilogramme. Silver and gold are applied by the electro-chemical process upon articles made either of brass or of white metal (*maillechort*), which is brass, with the addition of nickel. The prices of the metals which enter into the manufacture of these alloys are as follow: Copper, 200frs. to 300frs. the 100 kilogrammes; zinc, 75frs. to 80frs.; nickel, 12frs. to 13frs. The manufacture of plated ware is rapidly disappearing. The operations which contribute to the production of goldsmiths' work are very numerous. The metallic alloys are melted in crucibles; they are afterwards cast in moulds of beaten earth or sand; when taken from the mould, the articles pass into the hands of the chaser. The chaser's work is, however, economically replaced in the case of stamped work by presses and steel dies. By means of these processes are produced table ornaments, certain objects of art and various pieces of goldsmiths' work, which are also made by means of the lathe, the hammer, and stamping. Mounting consists in uniting the various parts of a work together; this is done by means of soldering, and also of screws and nuts. Spoons and forks are made by means of rollers, on which the forms of the article are engraved. The other processes are hand-engraving and biting in with acid, enamelling, engine-turning and polishing, with special lathes; and, lastly, finishing, which includes rouge-polishing and burnishing with steel, agate, and other tools. Goldsmiths' work is done almost exclusively either in large shops, or at the houses of master workmen, employing a certain number of assistants and apprentices; very few work entirely alone. The proportion of men to women employed in the business is four to one. The number of females engaged has, however, increased, since the introduction of electro-plated work, the polishing of which is entirely performed by them. The average rate of wages in Paris is 5frs. a day for men, and 2frs. 40c. for women. The manufacturers generally sell their productions either to retail dealers or to merchants and agents for exportation. The annual value of the productions, including plated ware, is 43,000,000frs., of which only about 4,000,000frs. worth are exported.

### Colonies.

**SUGAR IN QUEENSLAND.**—A Brisbane paper, of the 17th May, says:—"The sugar crop goes on satisfactorily, the ratoons looking particularly well. There is considerable anxiety amongst the growers as to how the cane is to be crushed and manufactured. Meetings have been held in several farming centres, and proposals for the formation of mill companies have been propounded. The presence of men of skill and experience in sugar-making and capitalists is much wanted. Many experiments are being tried with Roberts' diffusion process for extracting the cane juice, and several very fair samples of sugar, made after that method, have been shown."

**THE DIGGINGS IN NEW ZEALAND.**—Shortland, the principal digging township in Auckland, which already possesses three banks and several good hotels, is 48 miles from Auckland; there is water carriage all the way, and steamers are constantly plying to and fro, and make the trip in about four hours. There are about 3,000 men on the above diggings, and the number is steadily increasing. About eight miles from Shortland there is another township, where 1,500 men are living. About six months ago claims on these diggings were only of nominal value. A share in what has since turned out one of the richest claims, could have been bought for £5, and the holder now refuses to take £15,000 for his interest in it. The whole claim is valued at £100,000. Other claims, supposed to be even richer, have since been discovered. Many claims that were abandoned have been resumed by men with capital, who are reaping a rich harvest from their investment. Australian and West Coast

diggers speak very highly of the capability and permanence of these gold fields. It should be clearly understood that they are not poor men's diggings, a considerable amount of capital being required before a claim can be worked profitably.

### Notes.

**PROGRESS OF THE SUEZ CANAL.**—The works of the great maritime canal are progressing in a most satisfactory manner. The portion of the works of excavation up to the 15th of May are as follows:—

|   | Cubic metres. |
|---|---------------|
| Total amount excavated up to 15th February, 1868.....   | 36,555,369    |
| Amount excavated from 15th February to 15th March ..... | 1,554,630     |
| Amount excavated from 15th March to 15th April .....    | 1,486,898     |
| Amount excavated from 15th April to 15th May .....      | 1,797,000     |
| Total excavated to 15th May.....                        | 41,393,897    |
| Remaining to be excavated .....                         | 32,721,233    |

Total excavation in canal from Port Said to Suez (160 kils.) ..... 74,115,130

The average amount excavated per day during three months ending 15th May, has been 53,761 cubic metres, so that to complete the works of excavation 610 days will be required, supposing the same average daily progress is made.

### Correspondence.

**TURKISH TOBACCO IN NATAL.**—SIR,—Your former correspondent, Mr. John Robinson, editor of the *Natal Mercury*, who read a paper on Natal before the Society some years ago,\* writes to me that the coarse Turkish tobacco seed of Anatolia I sent to the colony suits some districts better than any other quality, and that the fresh grown seed is thankfully received. I certainly considered the quality so inferior as to be of little value; but this example shows it is desirable, in the case of seeds, to send to a colony every variety.—I am, &c., HYDE CLARKE.  
32, St. George's-square, S.W.

### MEETINGS FOR THE ENSUING WEEK.

- MON.....R. United Service Inst., 84. 1. Captain E. A. Inglefield, "Naval Tactics; with some Remarks on the recent Experimental Cruising of the Mediterranean and Channel Squadrons." 2. Captain Edmund Wilson will Exhibit and Explain certain Models, illustrative of his Plans for Armour-plating, working heavy Guns, &c."
- WED...Obstetrical, 8.
- FRI.....Geologists' Assoc., 8.  
Archæological Inst., 4.
- SAT.....Social Science Assoc., 3. (At the House of the Society of Arts.) "On the Natural Laws regulating the Rate of Wages and the Supply and Demand for Labour." The Rt. Hon. W. E. Gladstone, M.P., in the chair.

### PARLIAMENTARY REPORTS.

#### SESSIONAL PRINTED PAPERS.

- Par. Numb.  
139. Bill—Metropolitan Foreign Cattle Market (corrected copy).  
301. Trinity College (Dublin), &c.—Returns.  
Public General Acts—Cap. 16 to 30.
- Delivered on 9th June, 1868.
145. Bill—Bankruptcy Act Amendment.  
154. Representation of the People (Scotland) (amended).  
156. " New Zealand Company.  
157. " Larceny and Embezzlement.  
159. " Local Government Supplemental (No. 4).

\* See *Journal*, vol. xi., p. 424.



130. (rv.) Railway and Canal Bills—Fifth Report.  
256. East India (Bengal)—Return.  
Ritual Commission—Second Report, Evidence, &c.  
Manufactures, Commerce, &c.—Reports from Her Majesty's Secretaries of Embassy and Legation (No. 3, 1868).

*Delivered on 11th June, 1868.*

160. Bill—Local Government Supplemental (1868) (No. 5).  
279. Commitments (Scotland)—Return.  
285. East India (Lieutenant Grey)—Despatches.  
303. Metropolitan Foreign Cattle Market Bill—Report, Evidence, &c.

*Delivered on 13th June, 1868.*

167. Bill—Registration.  
165. " Boundary (amended in Committee).  
169. " Drainage Provisional Order Confirmation.  
328. Coolie Emigration—Memorial.  
Public Petitions—Twenty-fifth Report.

*Delivered on 15th June, 1868.*

123. Bill—Railways (Ireland) Acts Amendment.  
158. " Courts of Law Fees, &c. (Scotland).  
162. " Inclosure (No. 2).  
168. " Ecclesiastical Commissioners.  
166. " Representation of the People (Scotland) (as amended on consideration, as amended).  
41. Customs, &c.—Statement.  
315. China and Japan—Reports.  
323. Plymouth Breakwater Fort—Drawings.  
327. Boundary Commission—Return.  
329. Curragh of Kildare—Report.  
Nova Scotia—Despatches.

*Delivered on 16th June, 1868.*

129. Bill—Probate of Wills, &c. (Ireland).  
163. " Ecclesiastical Commissioners (corrected copy).  
170. " Sea Fisheries—Lords Amendments.  
115. (r.) Army (Manufacturing Establishments)—Returns.  
324. Mail Service (Asia and Australasia)—Account.  
East India—Statistical Abstract (1857 to 1866) (Second Number)

*Delivered on 17th June, 1868.*

319. Roehampton Gate (Richmond Park)—Correspondence.  
Public Petitions—Twenty-sixth Report.

*Delivered on 18th June, 1868.*

140. Bill—Entail Amendment (Scotland) (amended in Committee).  
171. " Petroleum Act Amendment (amended in Committee, and on re-commitment).  
172. " County General Assessment (Scotland) (amended in Committee).  
289. Fire Insurance—Account.  
Foreign Office Agencies—Correspondence respecting the Abolition.  
Army (Breech-loading Arms)—Reports.

## Patents.

*From Commissioners of Patents' Journal, June 19.*

### GRANTS OF PROVISIONAL PROTECTION.

Alum, &c.—1799—C. D. Abel.  
Anvils, &c., combining and casting various qualities of metal in the manufacture of—1827—D. Foster.  
Boilers—1560—M. Sef.  
Boilers—1528—G. Hartley and P. Robertshaw.  
Boilers, &c., tubes for—1824—W. E. Everitt.  
Bread, biscuits, &c.—1634—D. Riddell.  
Bricks—1616—G. Smith.  
Cans, &c.—1809—W. E. Newton.  
Carbonic oxide, &c.—1831—C. E. Brooman.  
Cartridges—1791—C. E. Brooman.  
Casks, cleansing—1724—J. Adams.  
Chlorine, &c.—505—W. Weldon.  
Cook and valve combined—1755—W. Dalziel.  
Conservatories, &c., ventilating, &c.—1729—J. Morgan.  
Corkscrews—1842—J. Page.  
Corks, drawing—1810—J. Law.  
Corks, drawing, &c.—1812—F. Schäfer.  
Drawing boards for stretching drawing paper—1784—J. Harman.  
Driving belts, bands, or straps—1811—L. Sterne.  
Fabrics, textile, producing designs on—1769—W. Maclean.  
Fabrics, &c., separating animal from vegetable substances in—501—W. E. Gedge.  
Fibrous materials, machinery for preparing, &c.—1836—J. Worth and A. Barker.  
Fibrous materials, spinning or twisting—1795—J. B. Farrar.  
Fruit, cleaning and drying—1814—R. Soans.  
Furnaces, consuming hydrocarbon oils in—1786—N. D. Spartall.  
Furnaces, supplying fuel to—1828—W. Rye.  
Garden engines and hydrepulps—1798—R. W. Page.  
Gas—1785—H. Hirzel.  
Gas meter indexes—988—G. B. Paterson.  
Gas meters, wet—1215—E. Dubois and E. Casper.  
Gunboats, &c., manœuvring—1780—T. Field.  
Horse rakes—1759—W. E. Newton.  
Horse-shoes—1835—J. Ashton.  
Hydrostatic presses, &c.—1781—R. Lüthy.  
Iodine—1819—C. D. Abel.

Iron and steel—1833—C. E. Brooman.  
Lace, &c., clipping—1776—L. Hamel.  
Lamps—1695—E. Jones.  
Liquid meters—1818—L. W. Wright.  
Locks—1842—A. M. Clark.  
Messages, &c., apparatus for receiving—1757—T. Drake.  
Motive-power apparatus—1837—J. Petrie, jun., and J. Fielden.  
Motive-power machinery—1273—J. E. F. Lüdeke.  
Paving—1807—G. A. H. Lillie.  
Petroleum, &c., deodorizing—1839—W. Firth.  
Pick-axes—1752—J. Reidy.  
Pictures, &c., mounting—1838—N. Salamon.  
Pipe joints—1816—J. H. Johnson.  
Pipes and cigar holders—1813—F. Roe.  
Ploughing apparatus, steam—1792—O. Reynolds.  
Propellers, screw—400—G. Roper.  
Pumps for actuating the pulp in paper-making machines—1787—  
I. B. Harris.  
Railway chairs and rails—1348—J. Liddard and G. Buxton.  
Railway points, manufacturing—1802—J. Tate.  
Railway rolling stock, &c.—1847—T. C. Gregory.  
Railway tickets, &c.—1487—T. H. Hall.  
Railway trucks—1817—J. H. Johnson.  
Railway wheels, &c.—1720—H. A. Dufrené.  
Sealing wax, appliance for holding—1832—F. Schäfer.  
Sewing machines—1779—H. A. Bonneville.  
Ships' blocks—1830—M. Rives.  
Silk, dressed, assorting the fibres of—1761—T. Greenwood.  
Smoke, prevention of—1796—D. Jones.  
Spinning machinery—1844—C. D. Abel.  
Spirit levels—1793—W. R. Lake.  
Sugar, manufacturing—1780—A. Smith.  
Sulphate of lime, obtaining and utilising—1841—M. Henry.  
Thrashing machines—1763—J. R. Hambling.  
Tobacco, manufacturing—1771—J. Drabble and J. S. Raworth.  
Tobacco, pulverised, sifting—1773—J. B. Gardner.  
Umbrellas—1789—R. Turner.  
Valves—1753—H. and F. Bailey.  
Venetian blinds, raising and lowering—1805—J. Avery.  
Venetian blinds, &c.—1820—H. J. Crockett.  
Watches—1797—G. P. Reed.  
Weaving—1782—T. Burrow and S. Keith.  
Windows, &c., hanging and supporting—1708—T. Craig.  
Wine, &c., cooling—1775—J. Nuellens and M. Neuhaus.  
Wood, impregnating with oleaginous and saline matters—1800—  
C. H. Wells.  
Wool, &c., condensers for working—1823—E. Fairburn.  
Wool, &c., machinery for washing—874—J. Petrie, jun.

### INVENTIONS WITH COMPLETE SPECIFICATIONS FILED.

Cranes—1924—G. Davies.  
Horse collars—1947—W. Leonard.  
Wheat, &c., hulling—1943—W. R. Lake.

### PATENTS SEALED.

|                              |                               |
|------------------------------|-------------------------------|
| 3635. C. G. Wilson.          | 10. W. J. Fraser.             |
| 3637. J. Davison.            | 26. M. E. Roy and L. Provett. |
| 3642. C. W. Lancaster.       | 58. W. Avery.                 |
| 3649. J. Dawkins.            | 271. J. H. Johnson.           |
| 3660. F. Render.             | 329. W. E. Newton.            |
| 3666. W. Hewitt.             | 357. C. E. Brooman.           |
| 3667. G. J. and T. C. Hinde. | 1270. W. Lund.                |
| 3670. B. and J. B. Bowen.    |                               |

*From Commissioners of Patents' Journal, June 23.*

### PATENTS SEALED.

|   |   |
|---|---|
| 3645. W. Walker.                                  | 68. L. Simon.                                       |
| 3652. F. A. Abel.                                 | 138. J. Kidd.                                       |
| 3656. P. F. Tranchat.                             | 225. C. E. Brooman.                                 |
| 3664. G. E. Allshorn.                             | 227. C. E. Brooman.                                 |
| 3669. N. Greenhalgh, W. Shaw,<br>and J. Mallison. | 257. T. L. G. Bell.                                 |
| 3673. J. Edge.                                    | 291. C. E. Brooman.                                 |
| 3677. J. M. Rowan.                                | 323. H. Aland.                                      |
| 3679. H. Higgins and T. S. Whit-<br>worth.        | 473. A. F. Bayford.                                 |
| 3706. M. A. F. Mennons.                           | 634. G. T. Bousfield.                               |
| 3707. M. A. F. Mennons.                           | 711. S. Sharrock.                                   |
| 3708. M. A. F. Mennons.                           | 923. B. E. R. Newlands.                             |
| 3709. T. Messenger.                               | 943. H. Chamberlain, J. Craven,<br>and H. Wedekind. |
| 7. A. M. Clark.                                   | 1057. H. Jones, jun., and W. F.<br>De la Rue.       |
| 12. C. W. May.                                    | 1369. F. C. Hills.                                  |
| 23. T. P. A. Key.                                 | 1400. J. Booth.                                     |
| 37. J. Nixon.                                     | 1405. J. H. Johnson.                                |
| 67. J. Tomlinson.                                 |   |

### PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

|                             |                     |
|-----------------------------|---------------------|
| 1868. J. P. B. Le Patourel. | 1641. G. Haseltine. |
| 1658. J. Scholl.            | 1902. J. Walton.    |
| 1719. W. E. Newton.         | 1679. J. Gale, jun. |
| 1791. J. W. Swan.           |                     |

### PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

|                     |  |
|---------------------|--|
| 1539. F. Potts.     | 1547. T. Melodew, C. W. Kessel-<br>meyer, & J. M. Worrall. |
| 1562. A. W. Gibson. |  |
| 1562. J. Cullen.    | 1653. J. W. Graham.  |